DATA COLLECTION:

A Joint Effort Between Government and Industry

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OBJECTIVE

- PROVIDE AN OVERVIEW OF COST AND PERFORMANCE REPORTING INTO DOD'S CENTRALIZED DATA BASE
  - COST AND SOFTWARE DATA REPORTING (CSDR)
  - EARNED VALUE MANAGEMENT (EVM) REPORTING
- IDENTIFY PROCESSES AND TOOLS AVAILABLE TO GOVERNMENT AND INDUSTRY TO ASSIST IN FULFILLING REPORTING REQUIREMENTS

THE CADE EFFECT ON THE COST COMMUNITY
Why We Need This Data:

CADE Integration Across the Community

COST COMMUNITY COORDINATION:

- Revolutionizing Cost Data collection
- Cost Community has Requirements, Leadership, & Operational Responsibility
- Common Terminology has created the ability to estimate across Departments

IMPROVED ACQUISITION OUTCOMES:

- **Authoritative Quality Data:** Cooperative Planning and Compliance lead to better data and improved program management
- **Cost Realism:** Provide real-time cost data for analysis & contract negotiations
- **Full view of Weapons Systems Program Performance:** Visual analytics, trend analysis & technical data to improve cost realism and make informed decisions

EFFICIENT AND EFFECTIVE ANALYSIS:

(at all levels: OSD, Services, PMOs)

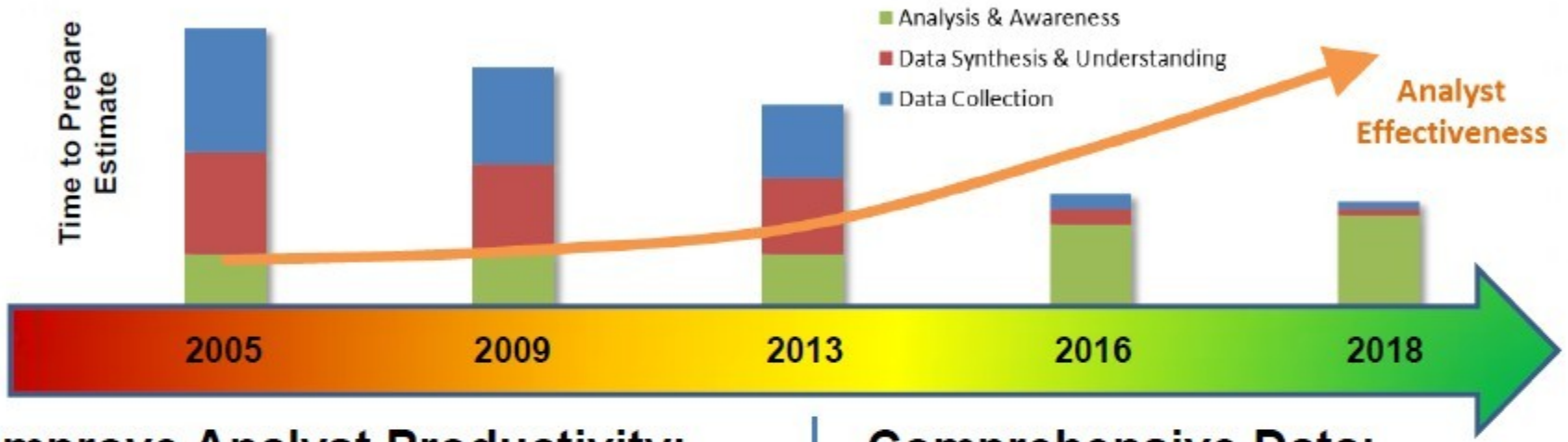
- Improved Analytical Rigor & Productivity
- More time for analysis; less time collecting data
- More comprehensive assessments & Reduced burden on Industry

CADE
About CADE, Request Access

CSDR
DCARC, DACIMS Policy, Info

EVM
EVM-CR, Policy, Info

Why Should You Care – More Efficient and Effective Analysis



Improve Analyst Productivity:

- Less burden on analyst to retrieve and process data
- Become familiar with programs more quickly
- Complete analysis facilitates telling the program's "story"

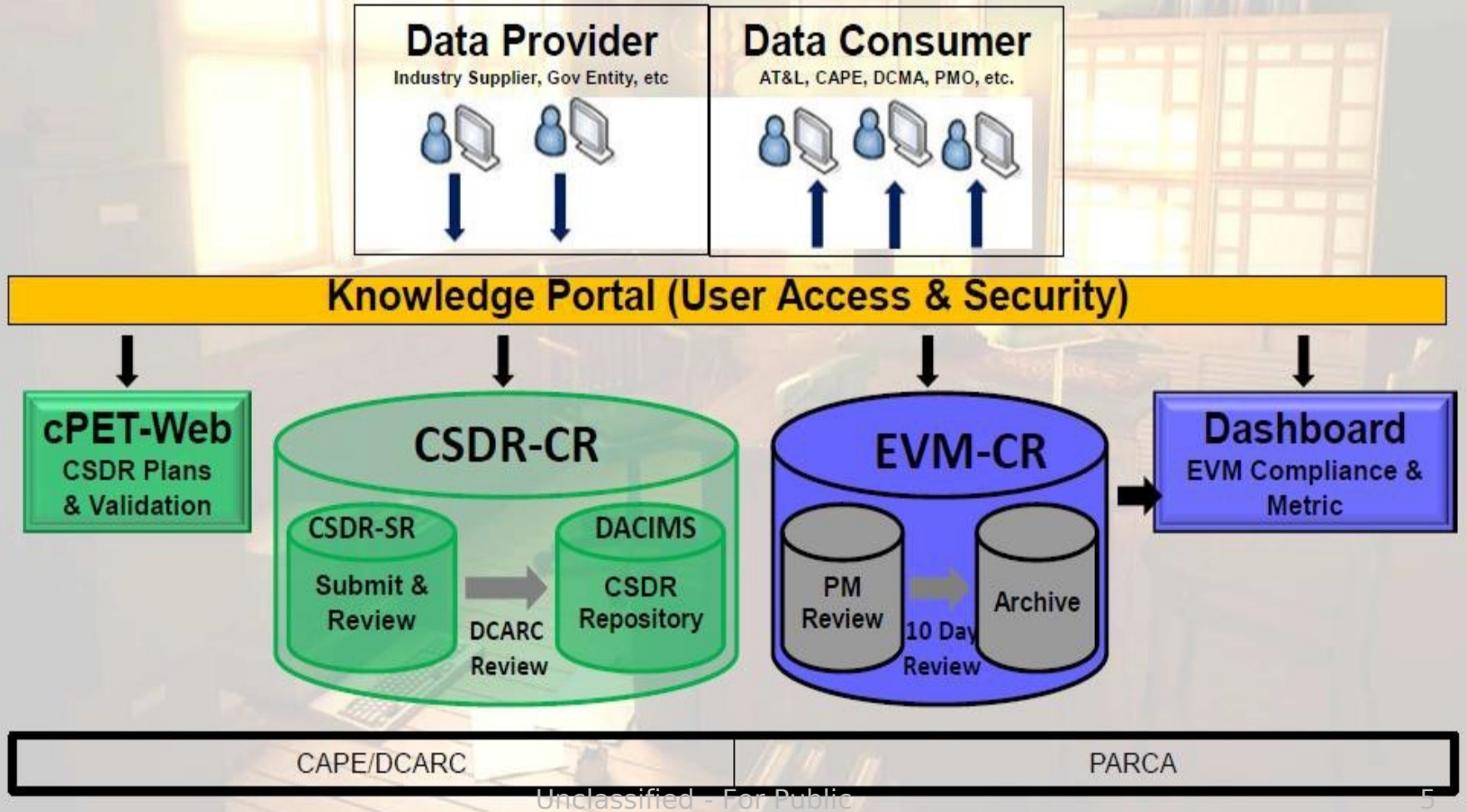
Comprehensive Data:

- Improved Planning and Compliance lead to better data
- "One-stop shop" for Cost, EVM, Programmatic, and Technical
- Centralized virtual library includes CARDs and ICEs

Cost analysts will have data and institutional knowledge at their fingertips. It will be the exception – not the rule – that we have to go back to Industry to do our estimates

System Architecture Overview

- Core CSDR and EV Applications Within Portal



Cost and Software Data Reporting (CSDR)

DCARC Portal

Defense Cost and Resource Center
OSD CAPE
CAPE
Access point to the CSDR-SR (Either a CAC or ECA Certificate is required)
Home
DCARC
Training & Events
Contact Us
DCARC Portal
Portal Login
Access to DACIMS, CSDR SR, cPetWeb, 1921-3 & FPR
Request Portal Access
Registration Instructions
eRoom Login
Access to Plan Development Forum
Request eRoom Access
Effective July 1st, 2014
all submissions of
Cost Data Summary Reports
(DD Form 1921), Functional Cost-Hour Reports
(DD Form 1921-1), and Progress Curve Reports
(DD Form 1921-2), under the May 2011 Data Item Descriptions, are required to submit Extensible Markup Language (XML) files and Excel-compatible files to the CSD
...The XML files can be generated automatically from the Excel-compatible files (or vice versa) with DCARC's cPet software tool.
Still having trouble? Send us an email
CSDR Plan implementation documents to assist you in the planning process (Analysts)
CSDR reporting documents to ensure proper reporting practices (Data Providers)
All policy documents are available for you to verify if this requirement applies to your program. (Program Offices)
Tools for CSDR plan and form generation. *GENERATES XML FORMATS (Analysts and Data Providers)
CSDR Overview and Policy
Introduction and Timeline
DODI 5000.02
CSDR Manual
CSDR Requirements
Defense Federal Acquisition Regulations Supplement (DFARS)
WBS - MIL-STD-881C
Operating and Support Cost Estimating Guide
Plan Development and Contracting
WBS - MIL-STD-881C
Planning Forms, RDT, and Instructions
CSDR Post-Award Meeting Procedures
RFP Language
CDRL Examples
cPet Application - Plan Development
Supporting Documentation Checklist
CSDR Forms and Reporting
DIDs and Reporting Forms
Validation Process
cPet Application - Cost Reporting and Validation
CSDR Submit & Review Website
Systems and Applications
CSDR Planning and Execution Tool (cPet)
CSDR Submit & Review Website
DACIMS
Defense Automated Cost Information Management System (DACIMS)
Data repository containing 48,144 reports as of December 2015, on 410 MDAP programs
Tools for CSDR success are available at http://cade.osd.mil/CSDR/

What are Cost and Software Data Reports? (CSDRs)

OSD CAPE

CCDR + **SRDR** = **CSDR**

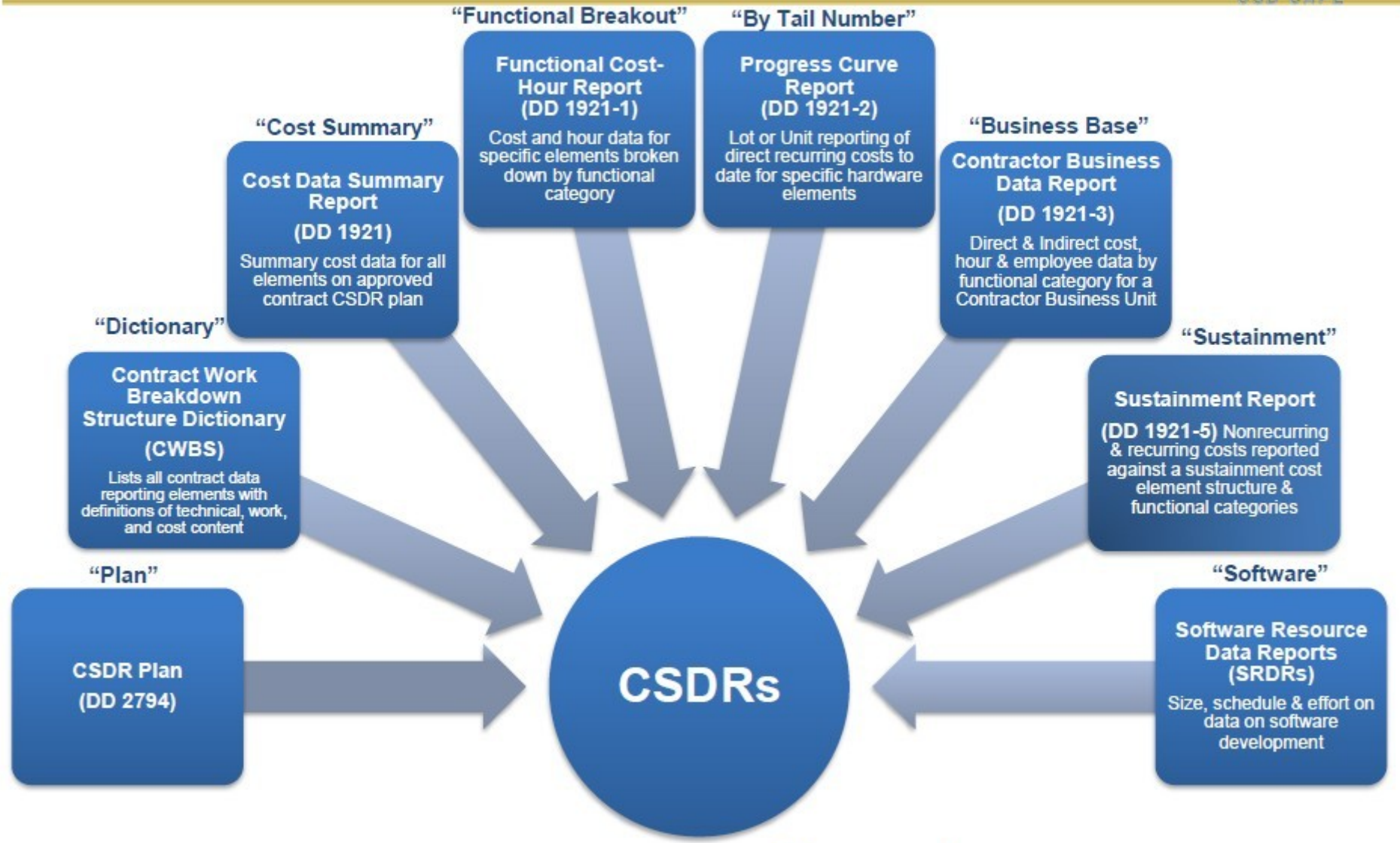
Contractor Cost Data Report + **Software Resources Data Report** = **Cost and Software Data Report**

- **Organized via a standard, product-oriented WBS**
- **Reporting required on MDAP/MAIS contracts and subcontracts**
  - Over $50M
  - Optional between $20M and $50M
  - ACAT II & III Programs (demand from services)
- **Helps us project future program & contract costs**
- **Available to all DoD Government analysts electronically**

Cost Assessment Data Enterprise

Types of CSDRs

CCDR + SRDR = CSDR


"Functional Breakout"
Functional Cost-Hour Report (DD 1921-1)
Cost and hour data for specific elements broken down by functional category
"By Tail Number"
Progress Curve Report (DD 1921-2)
Lot or Unit reporting of direct recurring costs to date for specific hardware elements
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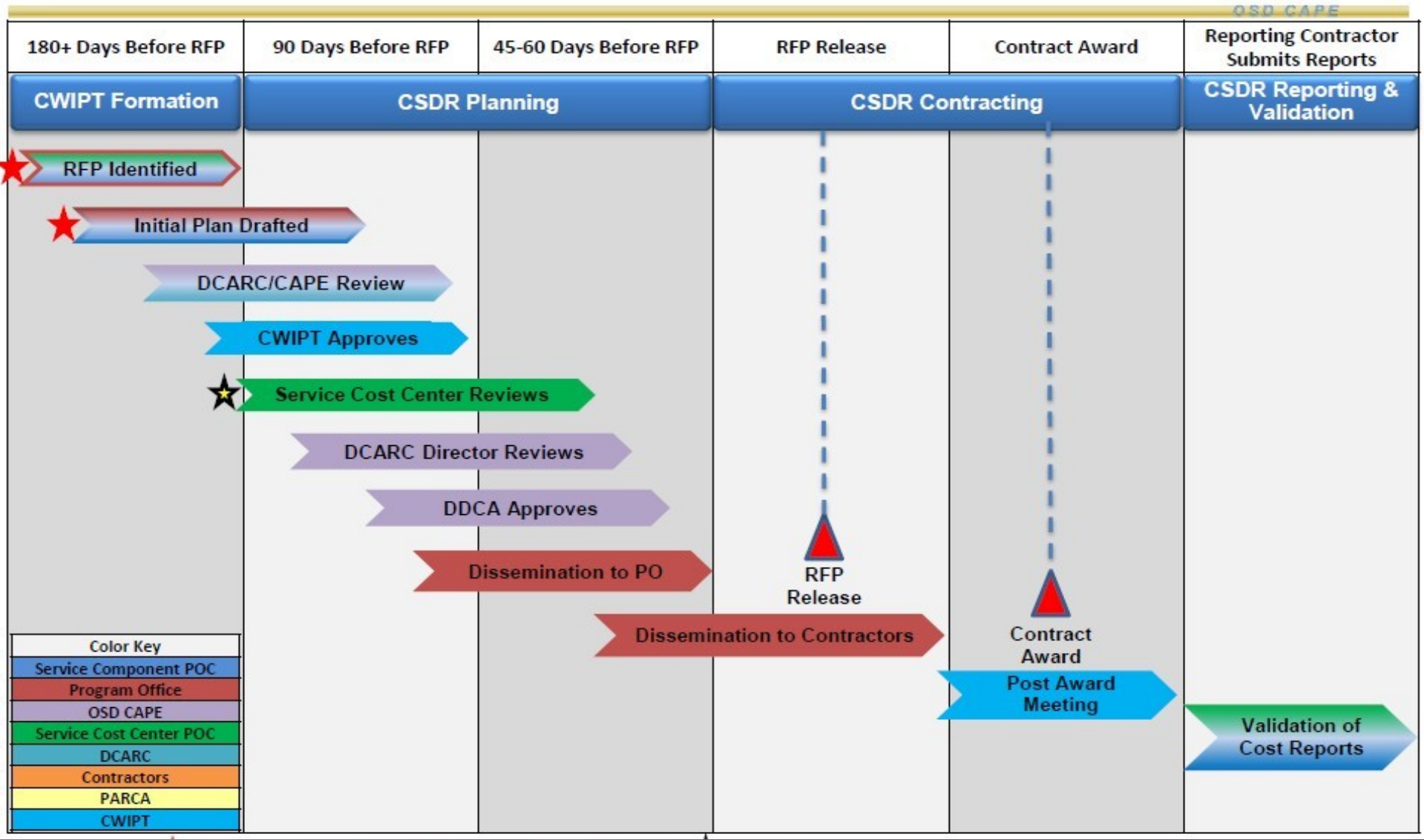
Direct & Indirect cost, hour & employee data by functional category for a Contractor Business Unit
"Dictionary"
Contract Work Breakdown Structure Dictionary (CWBS)
Lists all contract data reporting elements with definitions of technical, work, and cost content
"Sustainment"
Sustainment Report
(DD 1921-5) Nonrecurring & recurring costs reported against a sustainment cost element structure & functional categories
"Plan"
CSDR Plan (DD 2794)
CSDRs
"Software"
Software Resource Data Reports (SRDRs)
Size, schedule & effort on data on software development

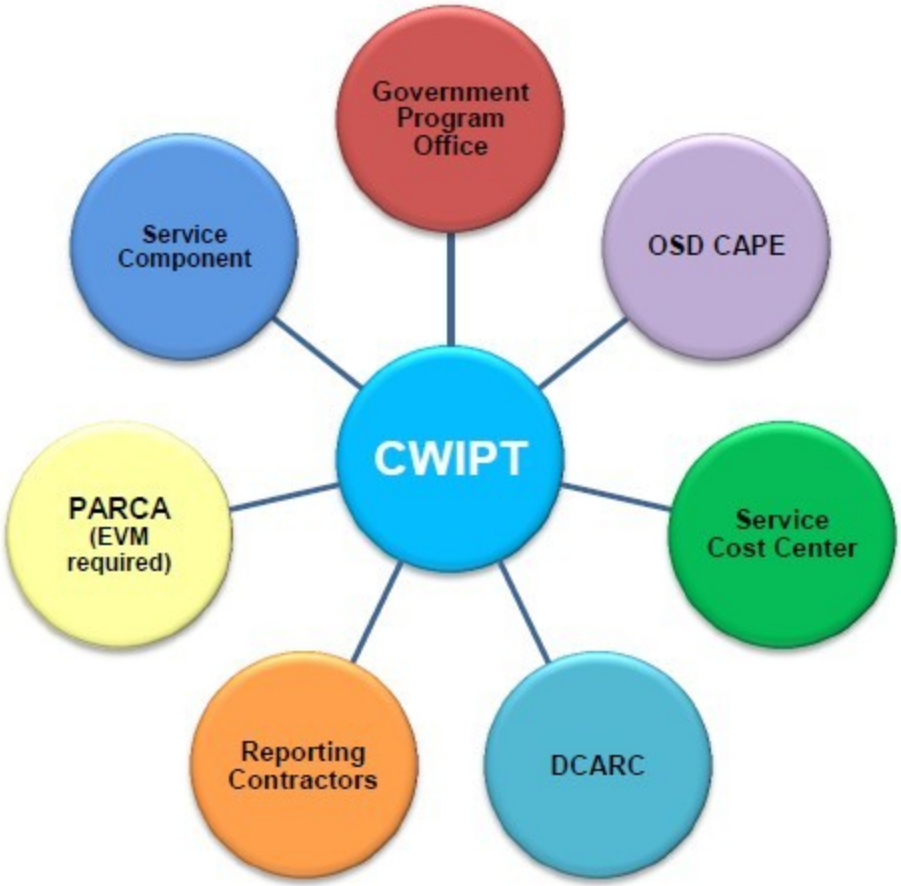
CSDR Data We Collect Today

Top Level CSDR Process



Cost Working Group Integrated Product Team

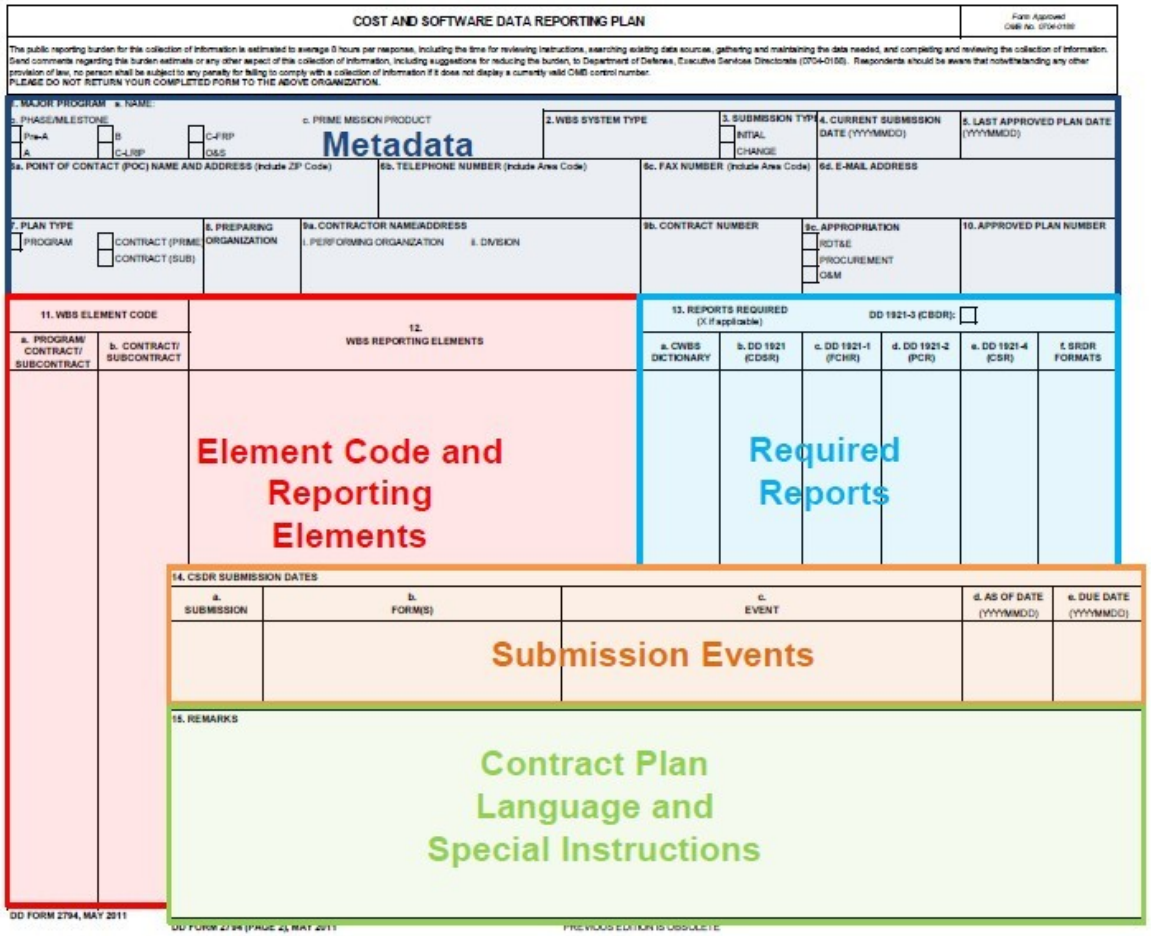
Participants	Role in PPM	Role
Service Component POC	Program Collaborator	Initiate CSDR process at Program Office; identify all RFP's going out
Program Office	Program Collaborator	Help develop initial plans; make DCARC/Service Component aware of all upcoming efforts
OSD CAPE	Program Collaborator	Provide input to plan to ensure cost needs are being met; provide final approval of plans
Service Cost Center POC	Program Collaborator	Help develop initial plan; provide input to plan to ensure cost needs are being met; provide initial approval
DCARC	DCARC Reviewer	Manage the entire CSDR planning process; ensure all rules and regulations are being followed
Reporting Contractors	N/A	If sole source, provide input and help government understand processes and procedures
PARCA	Program Collaborator	Provide input to ensure cost reporting structure and WBS are consistent where needed



CWIPT is responsible to the Program Manager for ensuring CSDR plans provide accurate, timely data in order to support cost estimating needs. The Program Manager is ultimately responsible for the formation of the CWIPT.

CSDR Plan

- Defines WBS used for CSDR submissions
- Identifies required reports
- Lists Submission Events and expected due dates
- Contains Standard Plan Language and Special Contractor Instructions



- Prepared by Program Office, approved by DCARC, and incorporated in solicitation IAW DFARS 252.234-7003 – Notice of CSDR System
- Contractor proposal should describe the process to comply with reporting requirement and address the adequacy of the CSDR plan

RFP Identified

CRITICAL to the SUCCESS OF CSDRs

- **All Stakeholders should assist in identifying:**
  Contracts > $50M
  - Competitive Bid? Sole source?
  - When will the contract be awarded?
- **Review all sources of contract information**
- **Confirm Release date and contract award date**

RFP and/or Contact Award information should always be relayed to DCARC office. The Service Component POC and the PMO/SPO would be responsible relaying this information.

- **After RFP identified:**
  - Set up initial CSDR planning meeting with key customers
    (NCCA, PMO, CAPE Analyst, EV Service Center, Syscom & DCARC)
  - Ensure CSDR language and plan are included in the RFP

Result: Service Component POC and PMO/SPO should always give DCARC heads up in advance

Initial Plan Drafted

- **Work with Program Office to identify effort**
- **Review CDRLs and SOW language**
- **Coordinate with CWIPT on initial draft plan**
- **Draft initial plan that is:**
  - Compliant with MIL-STD-881C
  - Compliant with cPet (CSDR Planning and Execution Tool)
  - Captures entire contractual effort
  - Satisfies CWIPT cost needs
- **Request following documents from the Program Office:**
  - Program Schedule
  - CDRLs
  - SOW Language
  - Resource Distribution Table (RDT)

Coordination takes approximately 10-20 hours per plan

Result: Service Component POC and PMO/SPO are responsible to work with DCARC and the Service Cost Center on the initial plan

Service Cost Center Reviews Plan

Service Cost Center will hold a meeting to ensure the CSDR plan meets cost community needs. The POC will provide initial approval of the CSDR plan before forwarding it to CAPE for final approval.

Service Cost Center Reviews

LESSONS LEARNED:

Review plan & understand plan package prior to meeting

Plan accordingly for the data you need ahead of time

Gain CWIPT agreement prior to meeting

Include PMO in invite

Include CAPE analyst

The following questions must be considered at this meeting:

- How are you going to use this data?
- Does this plan get you the data that you need?
- Does this plan get you the data when you need it?
- How many data points will you have for the next Milestone decision?
- Does this plan capture the entire contractual effort?
- Are all of the efforts on the contract (i.e. new build vs. buying kits vs. upgrades) discretely broken out in either the WBS or the reporting events?
- Will there be any learning on any aspects of the contract? Are 1921-2's applicable?
- Is there any software development effort? Are the SRDRs broken out by CSCI?
- How is the rate tooling broken out? Is it worthwhile getting?
- Are the modification/Installation/Integration costs segregated?
- Are there any anti-tamper or cyber security costs for this program?

Result: Entire CWIPT team should attend meeting and be prepared to answer all questions

DCARC Review and CAPE Approval of CSDR Plan

DCARC Director Reviews

DDCA Approves

Plan Package Presentation:

- Provide context
- Quality must be precise
- Solid story line
- CAPE Test

How am I going to use this data? How does this help me with my estimate?

When do I need the data and do the reporting events on the plan match my need?

Is there any software development effort? If so, how much? Do I need SRDRs?

Will there be any learning on this contract?

Result: Entire CWIPT team should attend meeting and be prepared to answer all questions

CWIPT Approves

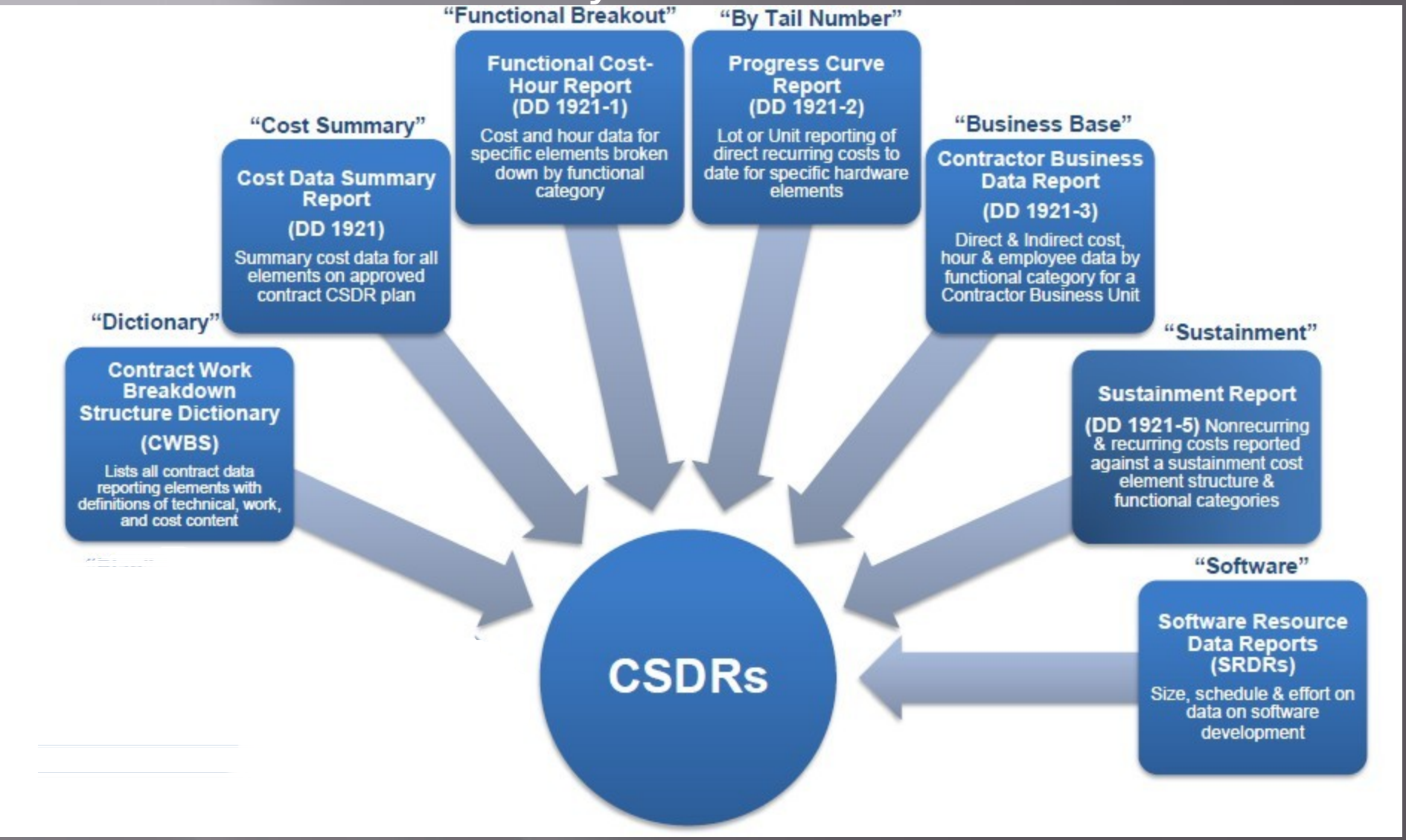
CWIPT Approves

Coordination takes approximately 10-20 hours per plan

- CWIPT is responsible for providing the thought leadership from a cost estimating perspective
- Going forward, the SYSCOM is responsible for coordinating the CWIPT and ensuring everyone agrees on the plan; if there is no SYSCOM rep, then the responsibility falls to the Service Cost Center
- All members of the CWIPT must vote in the Program Planning Module (PPM) in order for the plan to go up for approval
- Plans will not be approved without agreement from the entire CWIPT

CWIPT is responsible to the Program Manager for ensuring CSDR plans provide accurate, timely data in order to support cost estimating needs. The Program Manager is ultimately responsible for the formation of the CWIPT.

Industry CSDR Deliverables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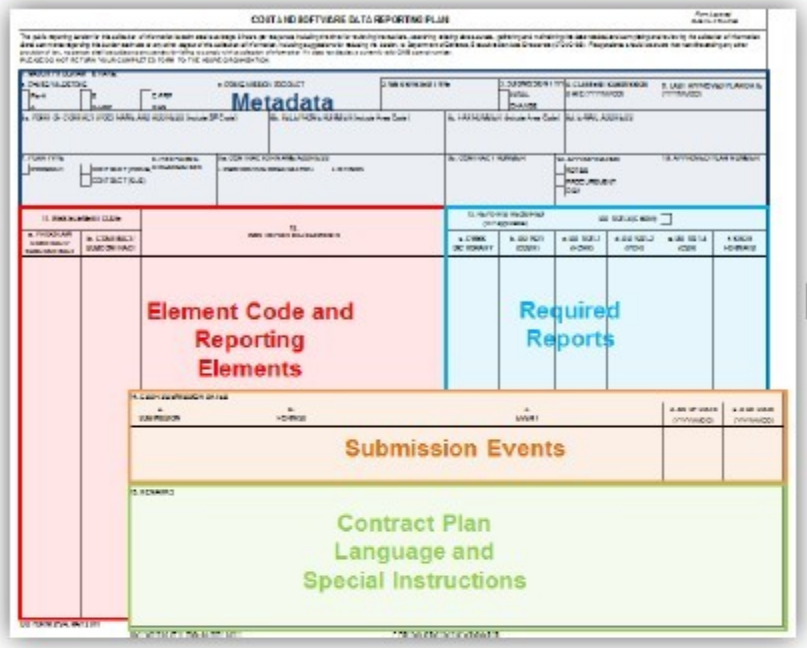
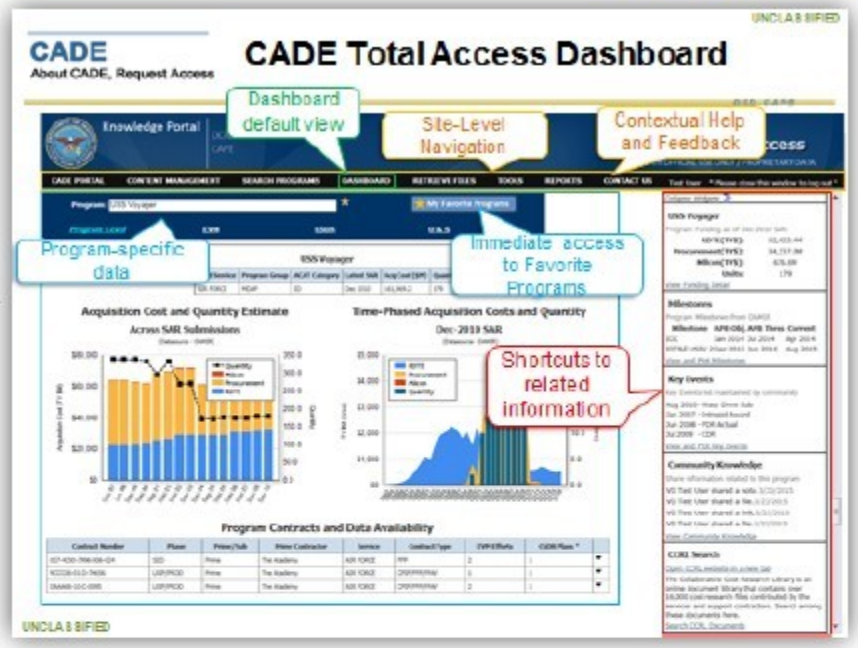
CSDRs

CSDR Validation



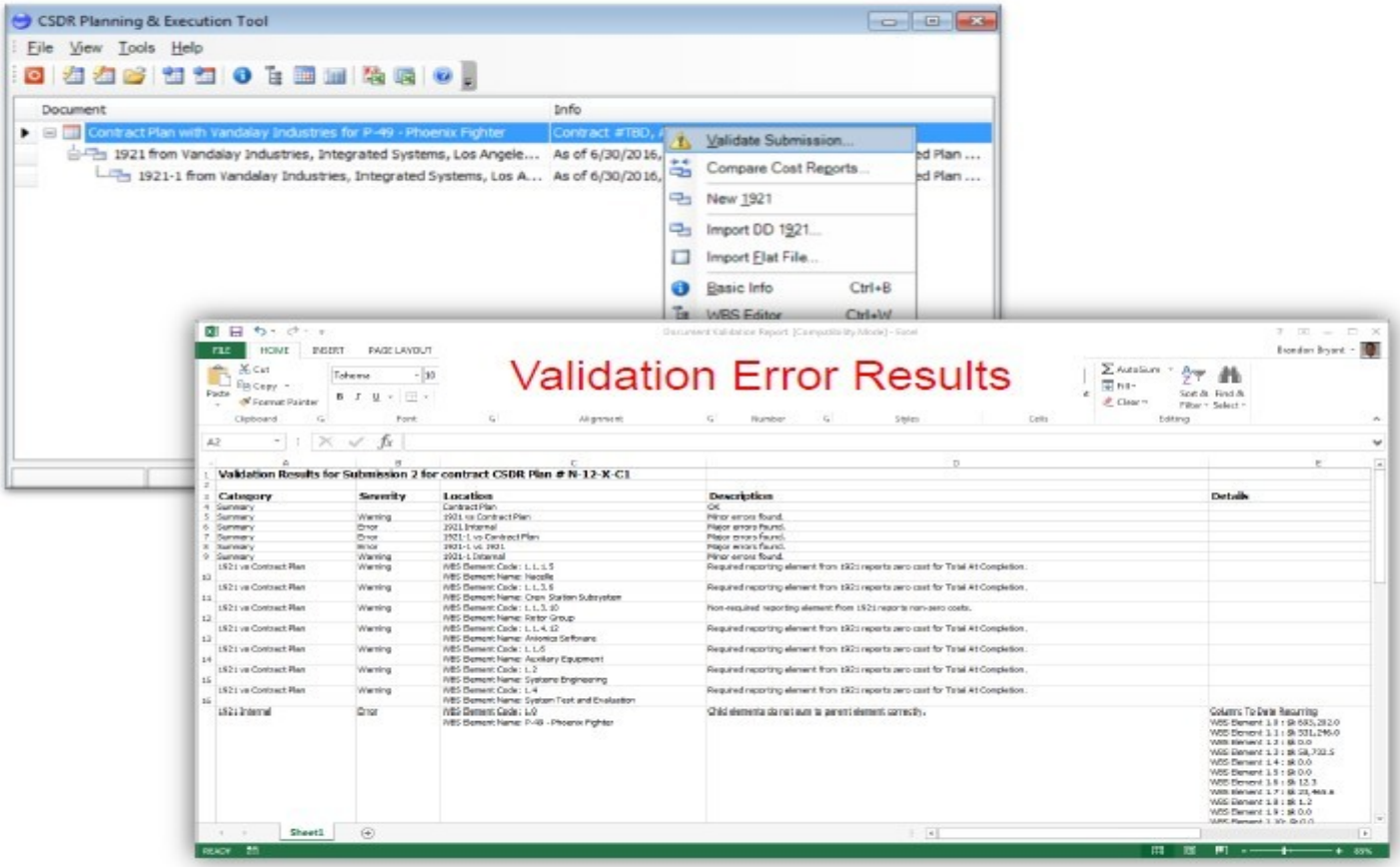


One of the most dangerous forms of human error is forgetting what one is trying to achieve.

cPet Software

cPet Checks:

- CCDRs are XML Compatible
- CCDRs are consistent with the CSDR Contract Plan
- Numbers sum correctly
- Checks for numerical anomalies
- 1921, 1921-1, and 1921-2 reports are consistent

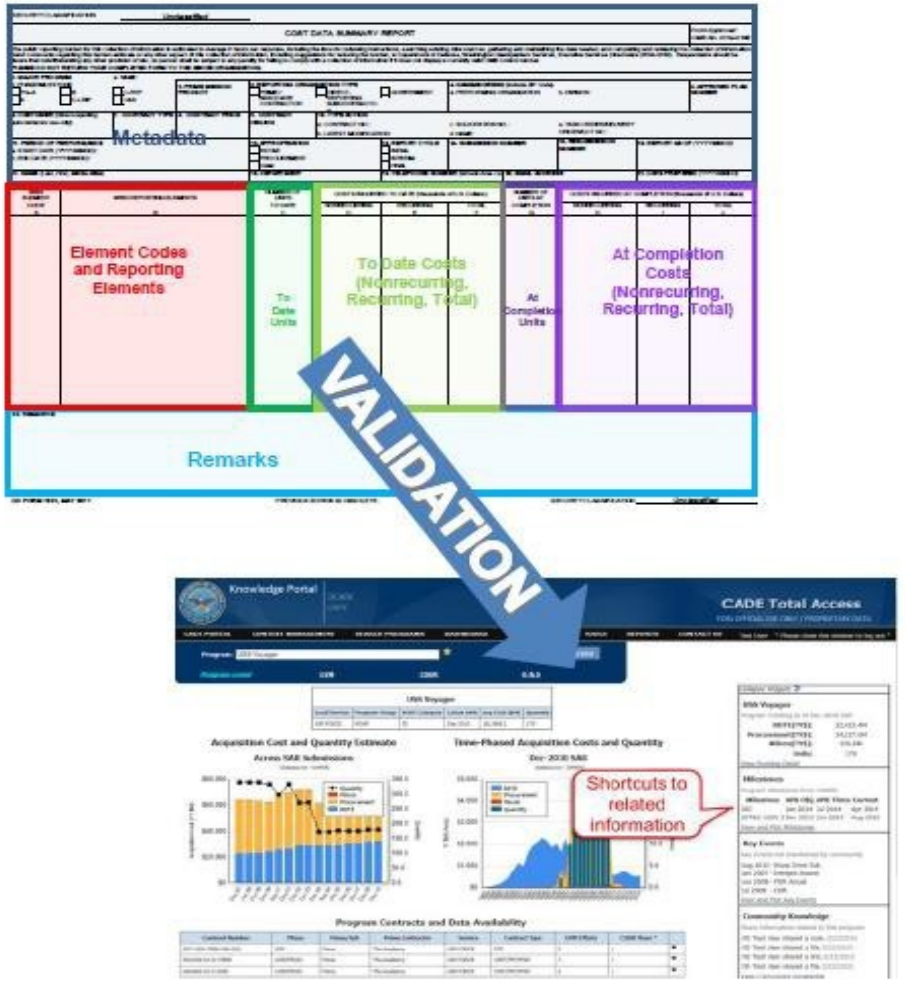


**All major errors must be corrected prior to submittal, cPet will identify those errors for you!!!!

Importance of Validations

Ensures:

- ✓ Data completeness and accuracy
- ✓ Comprehensive explanations of anomalies prior to acceptance
- ✓ Collective review by the cost community
- ✓ Ability to create a consistent and robust dataset

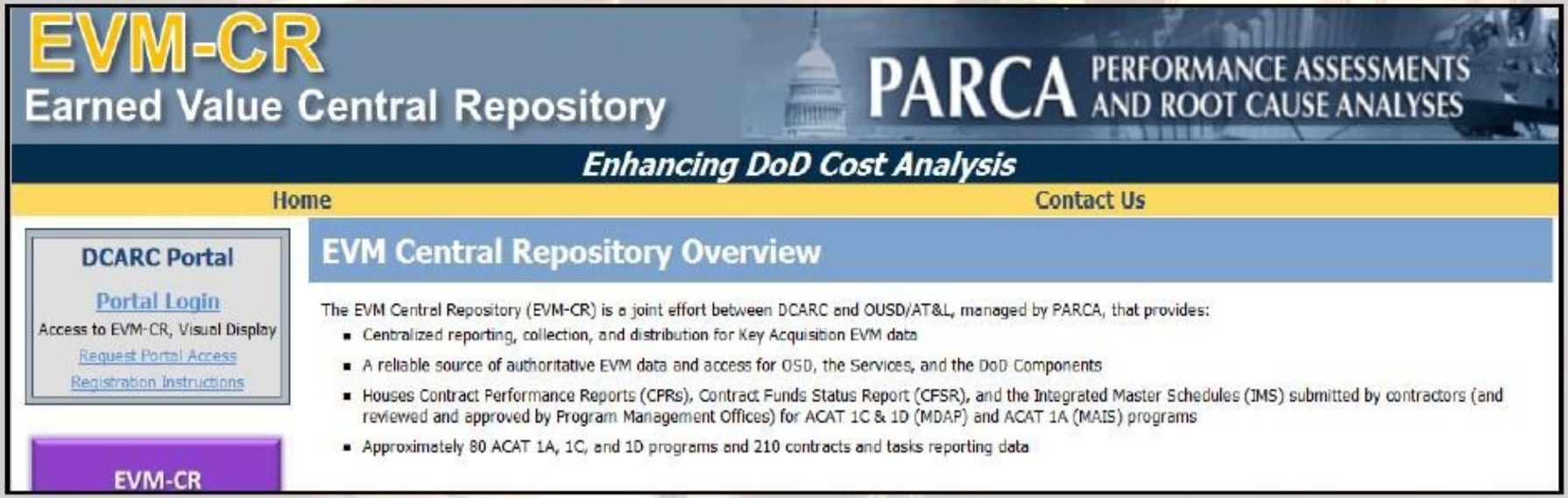


Earned Value Management Reporting

PARCA EVM

EVM Central Repository

- The purpose of the EVM-CR is to establish a source of authoritative EVM data for the Department and to provide timely access for the PMOs, Services, OSD and DoD Components
  - Managed by OUSD(AT&L) / PARCA
  - Hosted on DCARC servers; separate from CSDR information


EVM-CR
Earned Value Central Repository
PARCA PERFORMANCE ASSESSMENTS AND ROOT CAUSE ANALYSES
Enhancing DoD Cost Analysis
Home
Contact Us
DCARC Portal
Portal Login
Access to EVM-CR, Visual Display
Request Portal Access
Registration Instructions
EVM-CR
EVM Central Repository Overview
The EVM Central Repository (EVM-CR) is a joint effort between DCARC and OUSD/AT&L, managed by PARCA, that provides:
Centralized reporting, collection, and distribution for Key Acquisition EVM data
A reliable source of authoritative EVM data and access for OSD, the Services, and the DoD Components
Houses Contract Performance Reports (CPRs), Contract Funds Status Report (CFSR), and the Integrated Master Schedules (IMS) submitted by contractors (and reviewed and approved by Program Management Offices) for ACAT 1C & 1D (MDAP) and ACAT 1A (MAIS) programs
Approximately 80 ACAT 1A, 1C, and 1D programs and 210 contracts and tasks reporting data

PARCA EVM

EVM-CR Requirement

- ACAT 1A, 1C and 1D program/contracts with EVM reporting requirements are required to submit to the EVM-CR
  - Cost and schedule data expected monthly (IPMR)
  - Contract Funds Status Report (CFSR) expected quarterly
  - OUSD(AT&L) / PARCA has offered other ACATs access to submit
  - Reporting location information documented on contract CDRL(s)

NOTE: *Using the IPMR does not require reporting to the EVM-CR*

PARCA EVM

General Roles

- *EVM-CR Analyst*
  - As an EVM-CR Analyst you have access to published reports (no access to Rejected, Pending or Submitting reports)
  - Access to various reporting tools

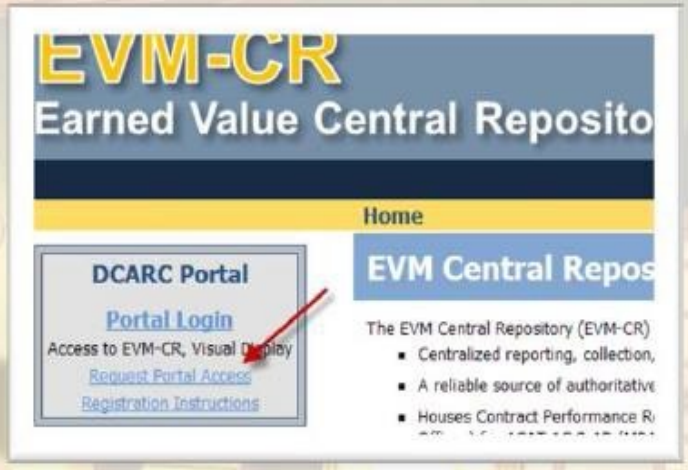
- *Submitter*
  - Performing contractor personnel who upload data files

- *Reviewer*
  - PMO team member that reviews submitted files
  - Lead reviewer has authority to approve or reject files in submission

Requesting Data Access

- **Data access must be requested via the Knowledge Portal**

http://cade.osd.mil/Default.aspx



- **Authorized personnel must have a valid Common Access Card (CAC) or be able to obtain a valid ECA Client Certificate to request an account**
  - Requires a Gov civilian or military confirmation/approval
- **Performing contractors (submitters) must have a valid ECA Client Certificate to request an account**

Data Access

- Only the DoD and DoD support contractors have access to the information provided to the EVM-CR
  - Gov Service members with Analyst role, have access to all contracts within their assigned services
- Performing Contractors team members have access only to the data on contracts they are associated with
- Summary data extracted by OSD DAMIR system for use in DAES process

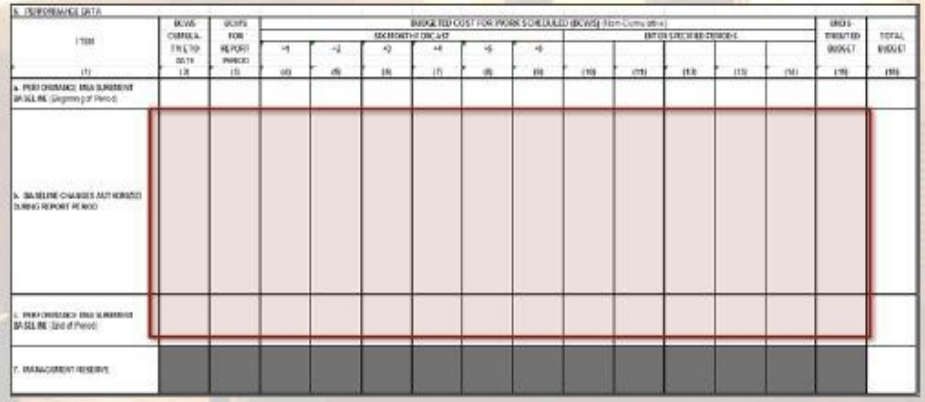
PARCA EVM

IPMR Data Item Description (DID)

- The IPMR contains data for measuring cost and schedule performance on Department of Defense (DoD) acquisition contracts. Its primary value is in reflecting current contract status and projecting future contract performance.
  - Format 1
    - Defines cost and schedule performance data by product-oriented Work Breakdown Structure (WBS)
    - ***Benefit:*** Provides a snapshot of EVM performance at the detail and summary level
  - Format 2
    - Defines cost and schedule performance data by the contractor's organizational structure (e.g., Functional or Integrated Product Team (IPT))
    - ***Benefit:*** Enables analysis of EVM performance at organizational elements

IPMR Data Item Description (DID) cont.

- Format 3
  - Defines time phased changes to the Performance Measurement Baseline (PMB)
  - Also provides estimated and original contract completion dates
  - ***Benefit:*** Enables analysis to track shifts in PMB



- Format 4
  - Defines staffing forecasts through program lifecycle
  - ***Benefit:*** Enables tracking and analysis to determine accuracy of labor estimates

IPMR Data Item Description (DID) cont.

- Format 5
  - Narrative report used to provide variance analysis of data contained in Formats 1-4 and 6 and corrective actions (15 WBS items)
  - Links information in the schedule to the cost status
  - ***Benefit:*** Analysis provides PM with information to make informed decisions

- Format 6 (Previously was a separate DID)
  - Defines and contains the contractor's Integrated Master Schedule (IMS)
  - ***Benefit:*** Enables analysis to predict milestone and program completion dates

PARCA EVM

IPMR Data Item Description (DID) cont.

- Format 7
  - Defines the annual reporting of time-phased historical and forecast cost submission
  - ***Benefit:*** Enhances Govt analysis beyond information in Format 1 or 5

The Format 7 specifically does not have "reporting format" – it is designed as a data delivery that can used for analysis in any tool

System Architecture Overvie

- Submitters: What happens to your submission files after upload?
- Reviewers: What happens after you review and accept a submission?

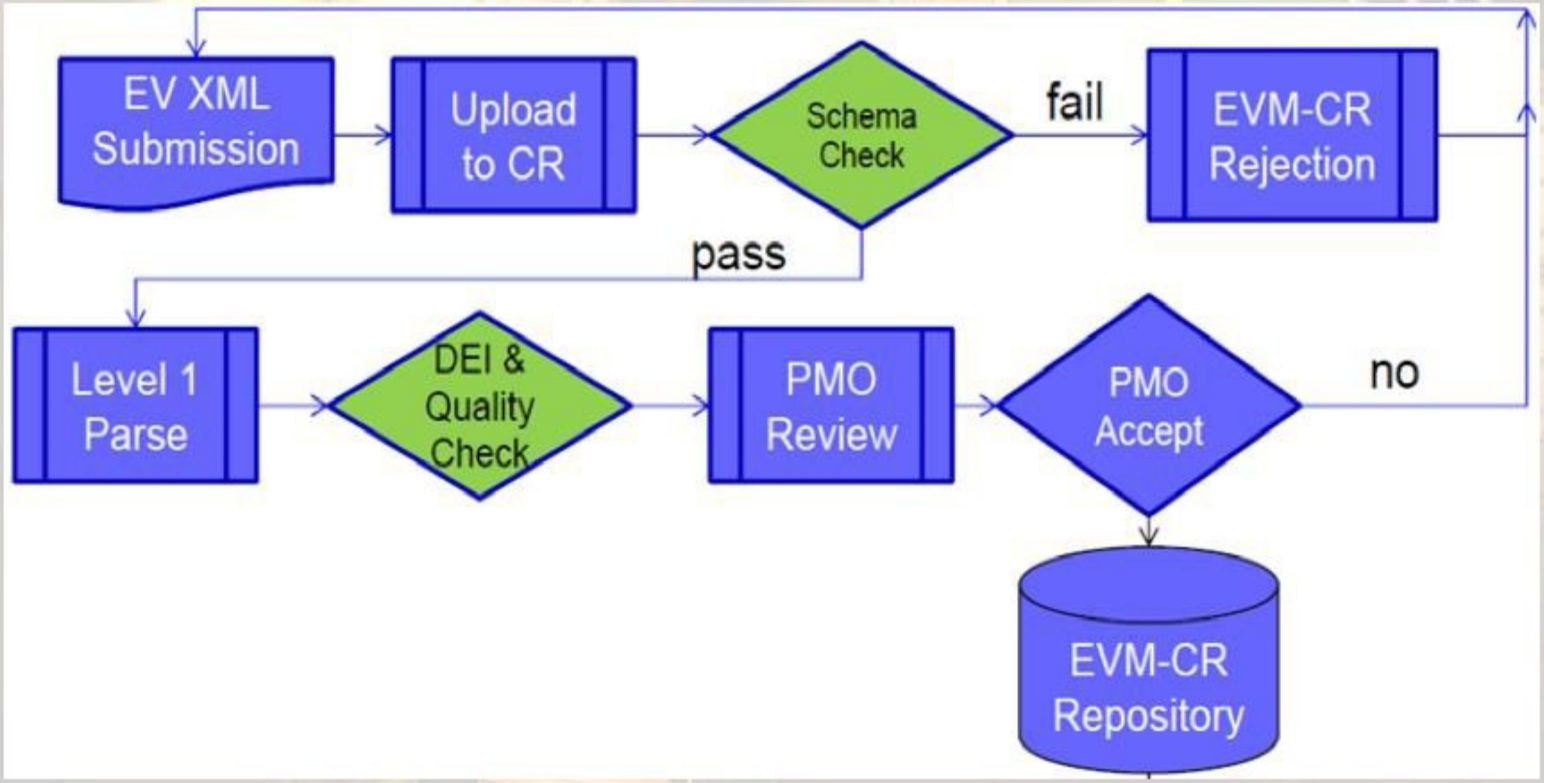
Who Is This Guy?

Let's Look Behind The Curtain

PARCA EVM

System Architecture Overview

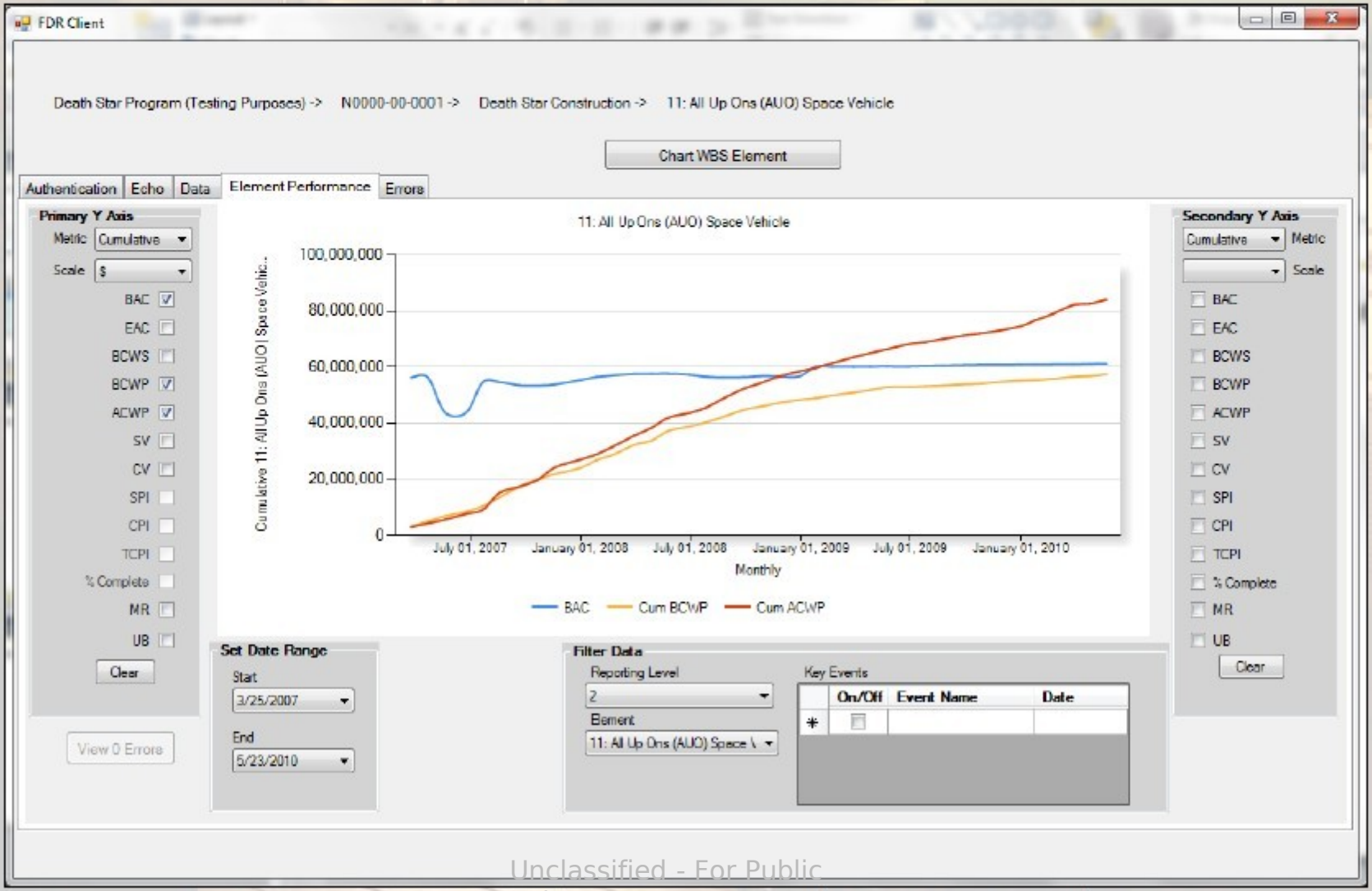
Handling Machine-Readable Files



PARCA EVM

Example Web Services Usage

Real-Time Visualization Through Web Services



PARCA EVM

Review Submission - Performance Over Time Chart

Links from Submission CPR page

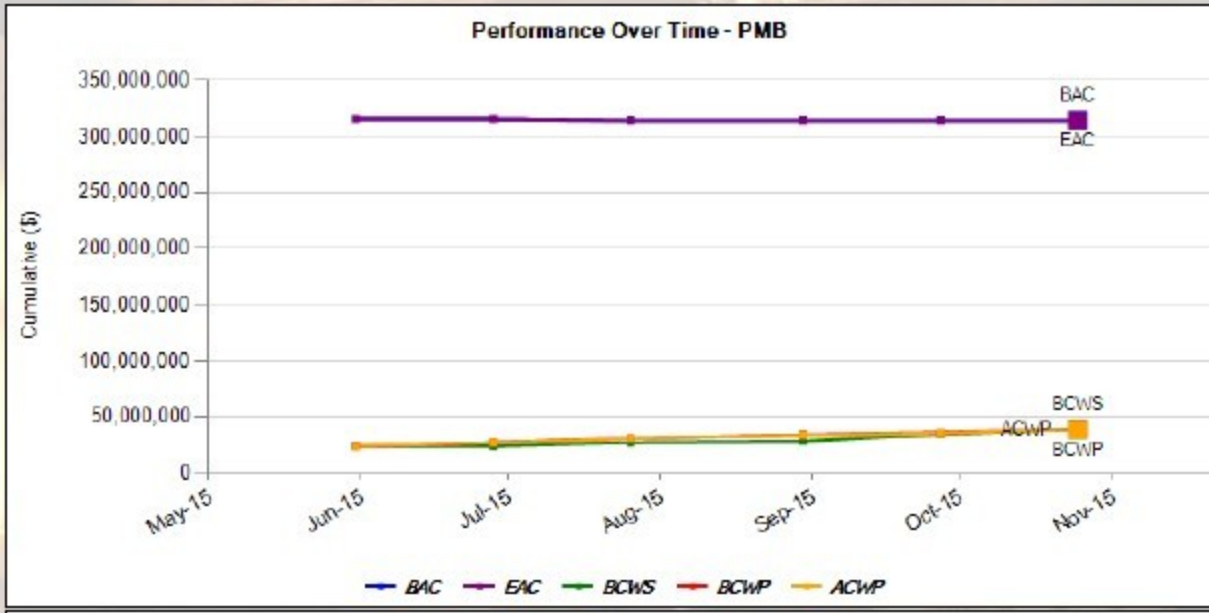
Report Links
Data Quality Validation

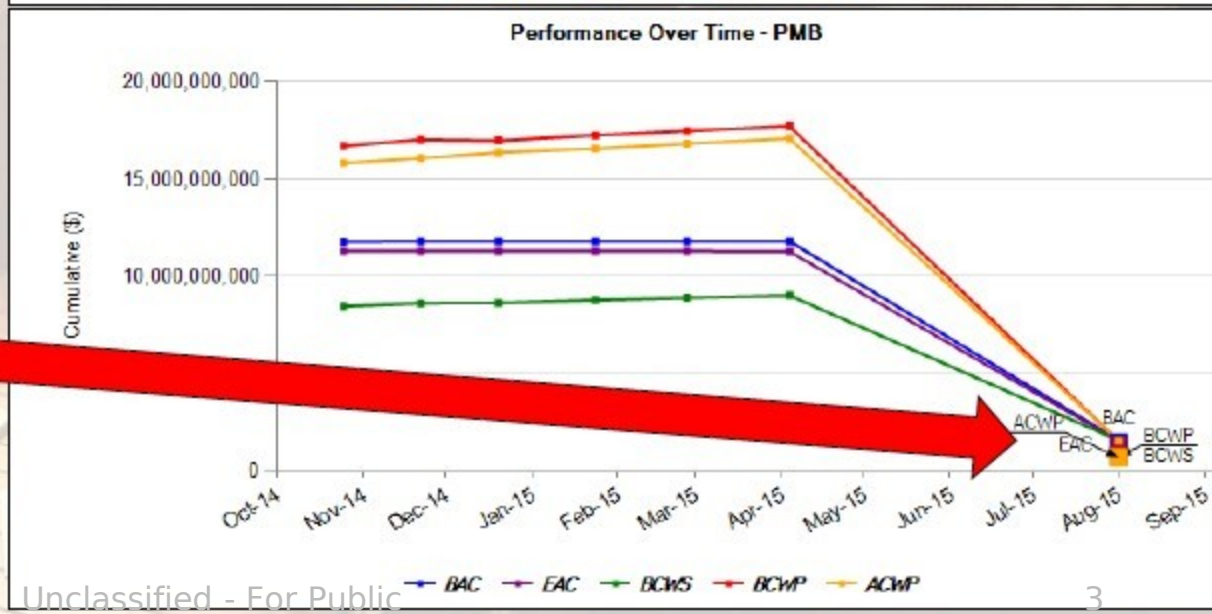
Chart Links
Performance Over Time

Shows PMB numbers for the contract task. The large squares at the far right represent the current file.

A chart like the one shown here indicates a drop in all PMB values since the last time period.

- Perhaps this is a component file?
- Was submission uploaded against an incorrect task?





PLAN EVOLUTION

FUTURE OF CSDRs

CCDR + SRDR = CSDR

PARCA

- Manual Entry
- Unreadable image files
- Not checked for arithmetic or logic errors

- Cut & Paste
- Easier data manipulation in excel / XML
- cPet and manual validations
- Cost community collaboration
- Accountability

FlexFiles

- Data Mapped & Pivotable
- Significant Reduction in labor to produce reports
- Collect data according to the contractor's financial structure
- Adheres to MIL-STD-881C

FlexFiles will reduce the time for data collection and increase the quality of data analytics

2011 CSDR Plan & Requirements

Cost Data Summary Repo rt
Functional Cost -Hour Repo rt
SRDR Initial Developer Report
Contractor WBS Dictionar
Contractor Business Data Report 1921-3
Progress Curve Report 1921-2
Sustainment Functional Cost -Hour Report 1921-5
SRDR Final Developer Report
2011 CSDR Plan

2015 CSDR/EVM Co-Plan & Requirements

*** IMPR Format 1 Consistency**
*** 1921, 1921-1, 1921-5 Optional EAC**

***New SRDR Development & Maintenance**

- **Cost Data Summary Report 1921**
- **Functional Cost -Hour Report 1921-1**
- **SRDR Development**
- **Contractor WBS Dictionary**
- **Contractor Business Data Report 1921-3**
- **Progress Curve Report 1921-2**
- **Sustainment Functional Cost -Hour Report 1921-5**
- **SRDR Maintenance**

2015 CSDR/EVM Co-Plan

1921-5 FORM

SECURITY CLASSIFICATION: Unclassified

SUSTAINMENT FUNCTIONAL COST-HOUR REPORT

Form Approved
OMB No. 0704-0188

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1. MAJOR PROGRAM NAME: a.

b. PHASE/MILESTONE: ☐ Pre-A ☐ A ☐ B ☐ C-LRIP ☐ C-FRP ☐ O&S

2. PRIME MISSION PRODUCT

3. REPORTING ORGANIZATION TYPE: ☐ PRIME / ASSOCIATE CONTRACTOR ☐ DIRECT-REPORTING SUBCONTRACTOR ☐ GOVERNMENT

4. NAME/ADDRESS (Include Zip Code): a. PERFORMING ORGANIZATION; b. DIVISION

5. APPROVED PLAN NUMBER

a. START DATE (YYYYMMDD):
b. END DATE (YYYYMMDD):

☐ INITIAL ☐ INTERIM ☐ FINAL

6. CUSTOMER (Direct-Reporting Subcontractor Use Only)

7. TYPE ACTION

13. NAME (Last, First, Middle Initial)

14. DEPARTMENT

15. TELEPHONE NO. (Include Area Code)

16. EMAIL ADDRESS

17. DATE PREPARED (YYYYMMDD)

a. CONTRACT NO.:
b. LATEST MODIFICATION:
c. SOLICITATION NO.:
d. NAME:
e. TASK ORDER/DELIVERY ORDER/LOT NO.:

a. TO DATE ☐ b. AT COMPLETION

☐ RDT&E ☐ PROCUREMENT

8. PERIOD OF PERFORMANCE	9. REPORT CYCLE	10. SUBMISSION NUMBER	11. RESUBMISSION NUMBER	12. REPORT AS OF (YYYYMMDD)

(1) DIRECT ENGINEERING LABOR HOURS

(5) DIRECT PROGRAM MANAGEMENT LABOR HOURS

MATERIALS

18. WBS ELEMENT CODE	19. WBS REPORTING ELEMENT	20. NUMBER OF UNITS	21. APPROPRIATION

22. REMARKS

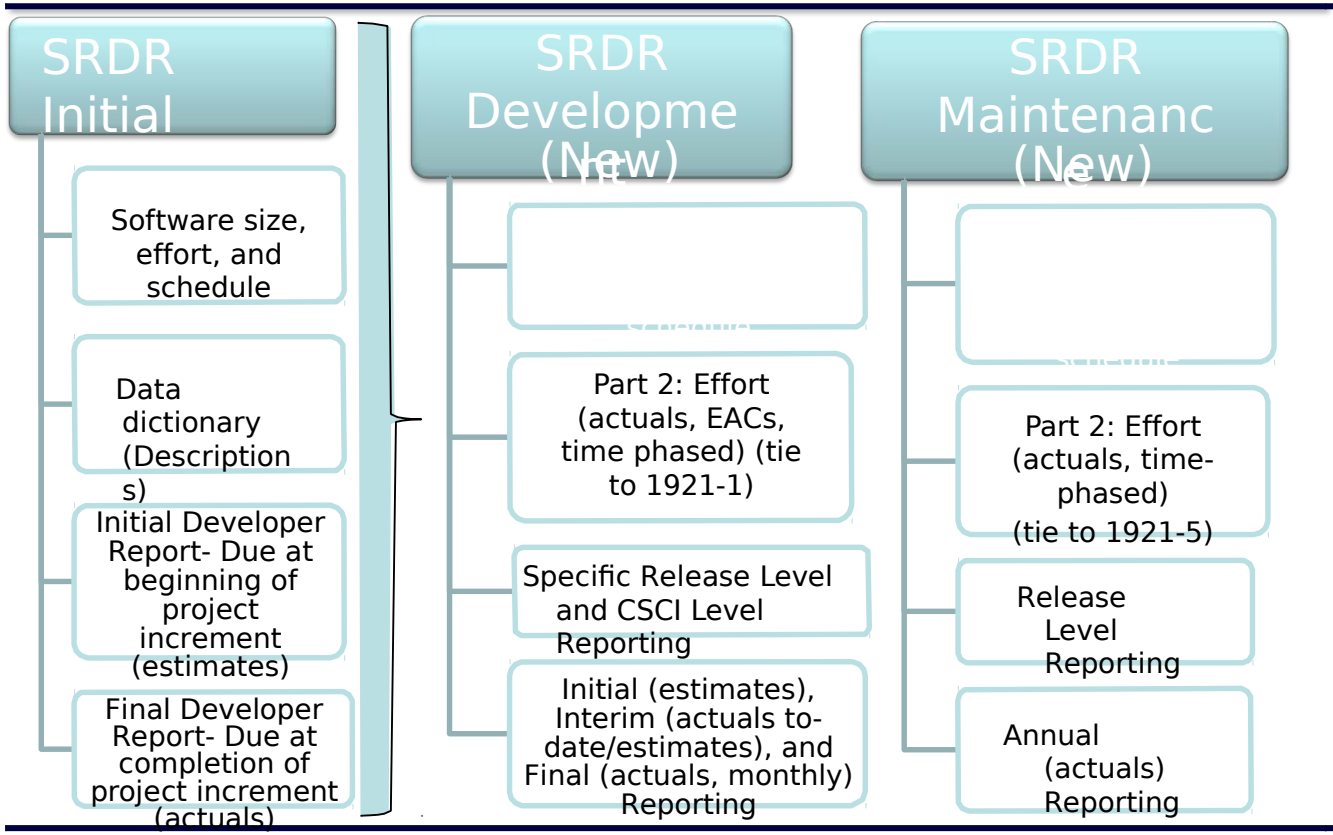
SUSTAINMENT FUNCTIONAL DATA ELEMENTS	COSTS AND HOURS INCURRED TO DATE (thousands of U.S. Dollars or thousands of hours)			COSTS AND HOURS INCURRED AT COMPLETION (thousands of U.S. Dollars or thousands of hours)		
ENGINEERING	A. NONRECURRING	B. RECURRING	C. TOTAL	D. NONRECURRING	E. RECURRING	F.TOTAL
(2) DIRECT ENGINEERING LABOR DOLLARS						
(3) ENGINEERING OVERHEAD DOLLARS						
(4) TOTAL ENGINEERING DOLLARS						

1921-1 to 1921-5 Comparison

1921-1 Format		1921-5 Format
ENGINEERING		**ENGINEERING**
(1) DIRECT ENGINEERING LABOR HOURS		(1) DIRECT ENGINEERING LABOR HOURS
(2) DIRECT ENGINEERING LABOR DOLLARS		(2) DIRECT ENGINEERING LABOR DOLLARS
(3) ENGINEERING OVERHEAD DOLLARS		(3) ENGINEERING OVERHEAD DOLLARS
(4) TOTAL ENGINEERING DOLLARS		(4) TOTAL ENGINEERING DOLLARS
MANUFACTURING OPERATIONS		**PROGRAM MANAGEMENT**
(5) DIRECT TOOLING LABOR HOURS		(5) DIRECT PROGRAM MANAGEMENT LABOR HOURS
(6) DIRECT TOOLING LABOR DOLLARS		(6) DIRECT PROGRAM MANAGEMENT LABOR DOLLARS
(7) DIRECT TOOLING & EQUIPMENT DOLLARS		(7) PROGRAM MANAGEMENT OVERHEAD DOLLARS
(8) DIRECT QUALITY CONTROL LABOR HOURS		(8) TOTAL PROGRAM MANAGEMENT DOLLARS
(9) DIRECT QUALITY CONTROL LABOR DOLLARS		**MAINTENANCE OPERATIONS**
(10) DIRECT MANUFACTURING LABOR HOURS		(9) TOUCH MAINTENANCE LABOR HOURS
(11) DIRECT MANUFACTURING LABOR DOLLARS		(10) TOUCH MAINTENANCE LABOR DOLLARS
(12) MANUFACTURING OPERATIONS OVERHEAD DOLLARS		(11)TOUCH MAINTENANCE OVERHEAD DOLLARS
(13) TOTAL MANUFACTURING OPERATIONS DOLLARS		(12) SUPPORT MAINTENANCE LABOR HOURS
		(13) SUPPORT MAINTENANCE LABOR DOLLARS
		(14) SUPPORT MAINTENANCE OVERHEAD DOLLARS
		(15) TOTAL MAINTENANCE OPERATIONS DOLLARS
MATERIALS		**MATERIALS**
(14) RAW MATERIAL DOLLARS		(16) RAW MATERIAL DOLLARS
(15) PURCHASED PARTS DOLLARS		(17) PURCHASED PARTS DOLLARS
(16) PURCHASED EQUIPMENT DOLLARS		(18) PURCHASED EQUIPMENT DOLLARS
(17) MATERIAL HANDLING OVERHEAD DOLLARS		(19) MATERIAL HANDLING OVERHEAD DOLLARS
(18) TOTAL DIRECT-REPORTING SUBCONTRACTOR DOLLARS		(20) TOTAL DIRECT-REPORTING SUBCONTRACTOR DOLLARS
(19) TOTAL MATERIAL DOLLARS		(21) TOTAL MATERIAL DOLLARS
OTHER COSTS		**OTHER COSTS**
(20) OTHER COSTS NOT SHOWN ELSEWHERE *(Specify in Remarks)*		(22) OTHER COSTS NOT SHOWN ELSEWHERE *(Specify in Remarks)*
SUMMARY		**SUMMARY**
(21) TOTAL COST *(Direct and Overhead)*		(23) TOTAL COST *(Direct and Overhead)*

Software Resource Data Reports (SRDRs)

Initial & Final (Old) vs Development & Mx (New)


SRDR Initial
Software size, effort, and schedule
Data dictionary (Description s)
Initial Developer Report- Due at beginning of project increment (estimates)
Final Developer Report- Due at completion of project increment (actuals)
SRDR Developme (New)
Part 2: Effort (actuals, EACs, time phased) (tie to 1921-1)
Specific Release Level and CSCI Level Reporting
Initial (estimates), Interim (actuals to-date/estimates), and Final (actuals, monthly) Reporting
SRDR Maintenanc (New)
Part 2: Effort (actuals, time-phased) (tie to 1921-5)
Release Level Reporting
Annual (actuals) Reporting

2016 FlexFile Co-Plan & Requirements

*Financial Data
*Standard Labor Category Mapping
* Decoder Ring
* Supplemental Supplier Info
* IPMR Format 1 Consistency

FlexFile

* Technical Data Parameters
* Core Quantity Data
*Quantity per Shipset

Technical Data Report – Tech Parameters

Technical Data Report – Quantity 1921-Q

SRDR Development

SRDR Maintenance

FlexFile Contractor WBS Dictionary

Contractor Business Data Report 1921-3

2016 FlexFile Co-Plan

Objectives of FlexFile

1. Replace current CCDR report formats with XML-like schema that leverages capabilities of contractor financial data systems
2. Meet requirements of use cases not satisfied by current CCDR format
   A. Whether focused on one program or focused on early alternatives/independent estimates
   B. More data, less ad hoc requests
3. Repeatable, manageable process
4. Recreate 1921, 1921-1, 1921-2 from data provided

Support cost estimating mission with more data that is less costly to produce & requires fewer ad hoc requests

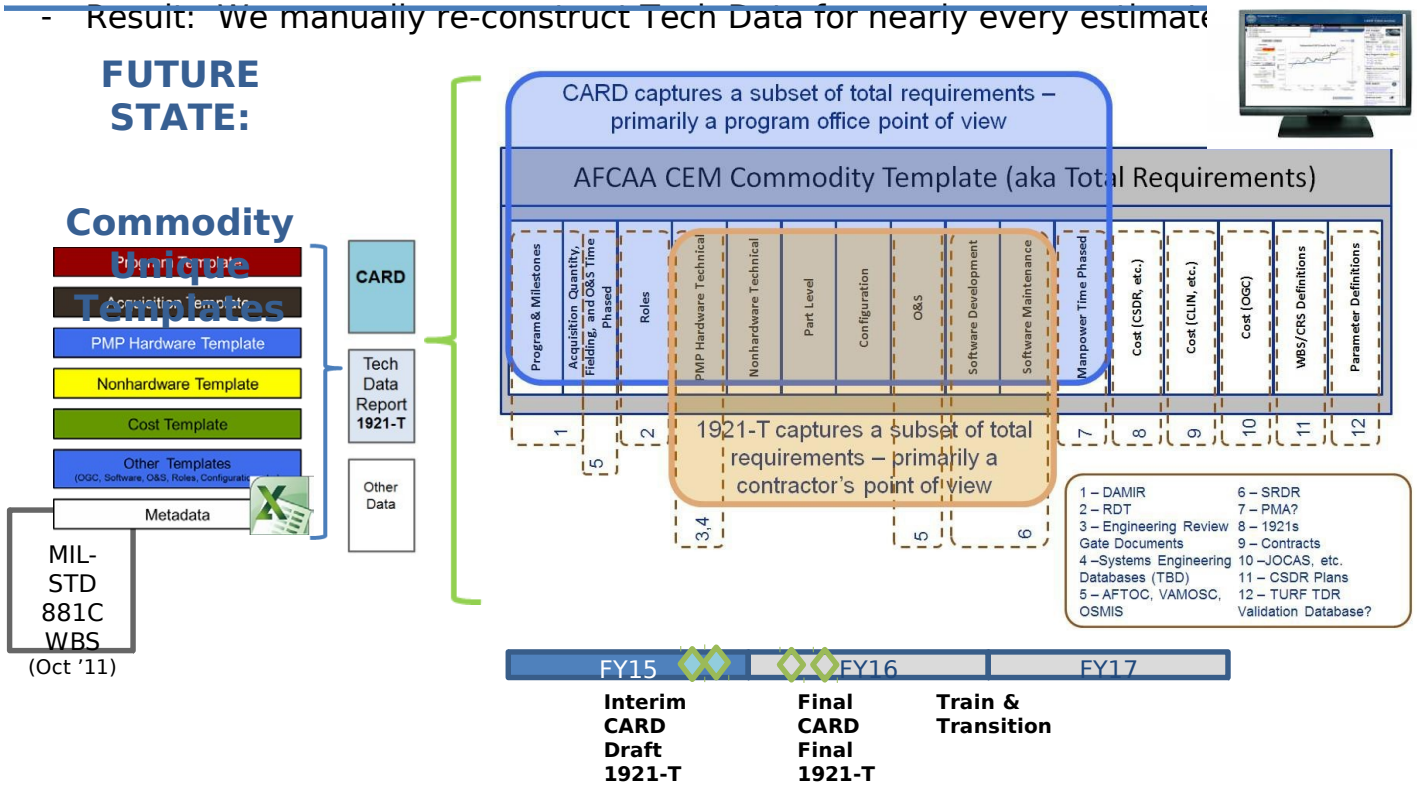
TECHNICAL DATA STREAMLINING

CURRENT STATE:

- Current data collection methods are ad-hoc, inefficient, and scattered across the department
- Historically, CARD is stagnant; too much narrative & not enough real data
- Result: We manually re-construct Tech Data for nearly every estimate

CA

FUTURE STATE:



CSDR/EVM Co-Plan Format

Co-Plan Metadata

WBS Element Codes & Names

CSDR Reporting Requirements

EVM Reporting & IPMR Reporting Level of Consistency

COST AND SOFTWARE DATA REPORTING/EARNED VALUE MANAGEMENT CO-PLAN

Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 8 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

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DD FORM 2794 (Page 1), AUGUST 2015 PREVIOUS EDITION IS OBSOLETE

CSDR Submission Events

COST AND SOFTWARE DATA REPORTING & EARNED VALUE MANAGEMENT CO-PLAN — *FORM APPROVED OMB NO. 0704-01888*

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28. CSDR SUBMISSION DATES

a. SUBMISSION	b. FORMAT/FORM	c. EVENT	d. EVENT TYPE	e. AS OF DATE	f. DUE DATE

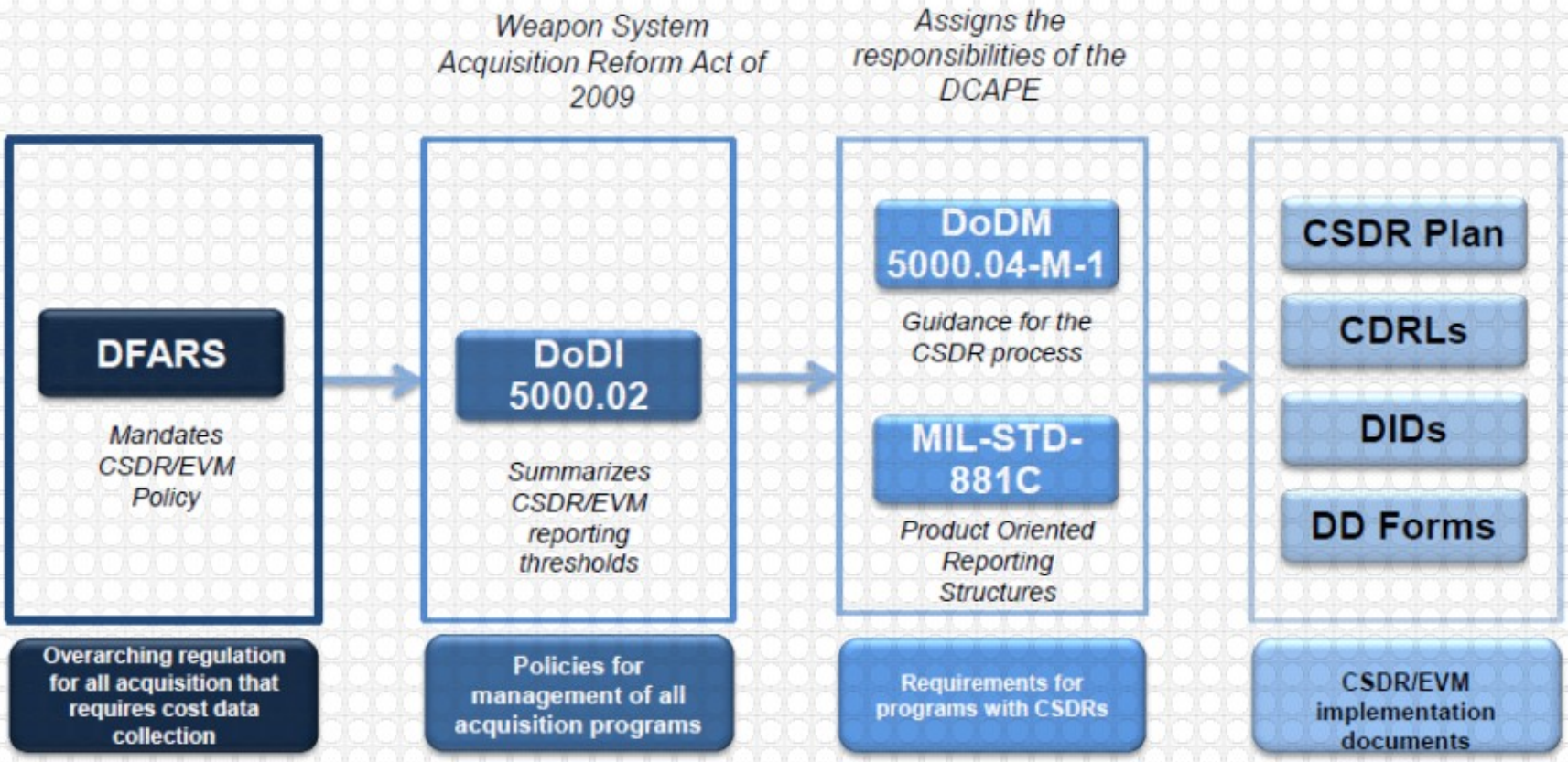
DD FORM 2794, Part C (Submissions), AUGUST 2014 DRAFT — PREVIOUS EDITION IS OBSOLETE — SECURITY CLASSIFICATIO — Unclassified

- EVM Submissions will not be outlined on page 2 of the Co-Plan; are contained in the CDRL
- Addition of “Event Type” column:
  - Event Type will be Initial, Interim, or Final

BACKUP SLIDES

Cost Assessment Data Enterprise

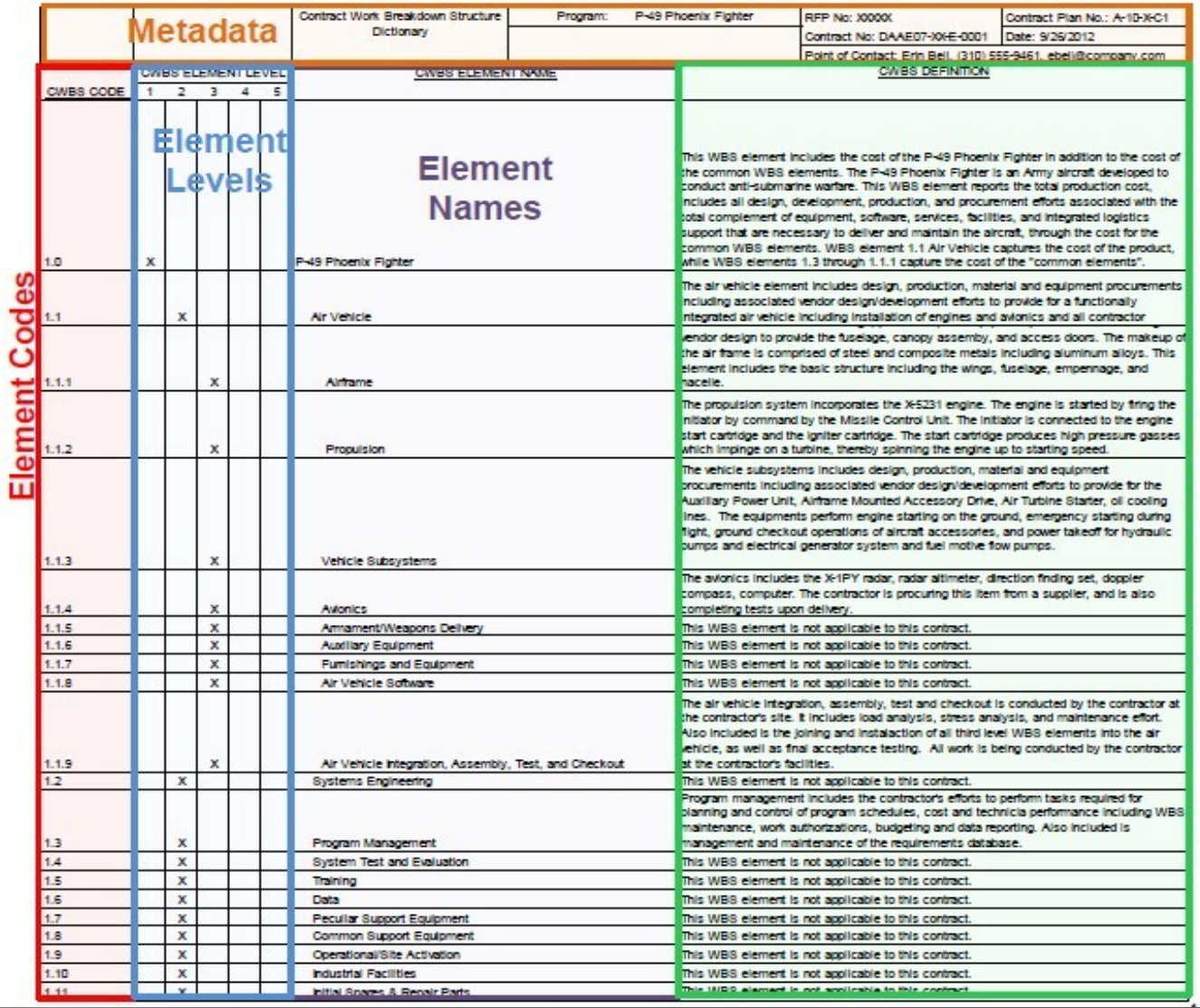
Why Should You Comply?



Systematic cost data collection is necessary for program stability

CWBS Dictionary

- Provides definitions for all WBS elements
- Cost, technical and work content included in definitions
- Physical description for all hardware elements



Metadata	Contract Work Breakdown Structure Dictionary	Program: P-49 Phoenix Fighter	RFP No: XXXXX	Contract Plan No.: A-10-XC1
			Contract No: DAAE07-XXE-0001	Date: 9/26/2012
			Point of Contact: Erin Bell, (310) 555-9461, ebell@company.com	

Element Codes

Element Levels

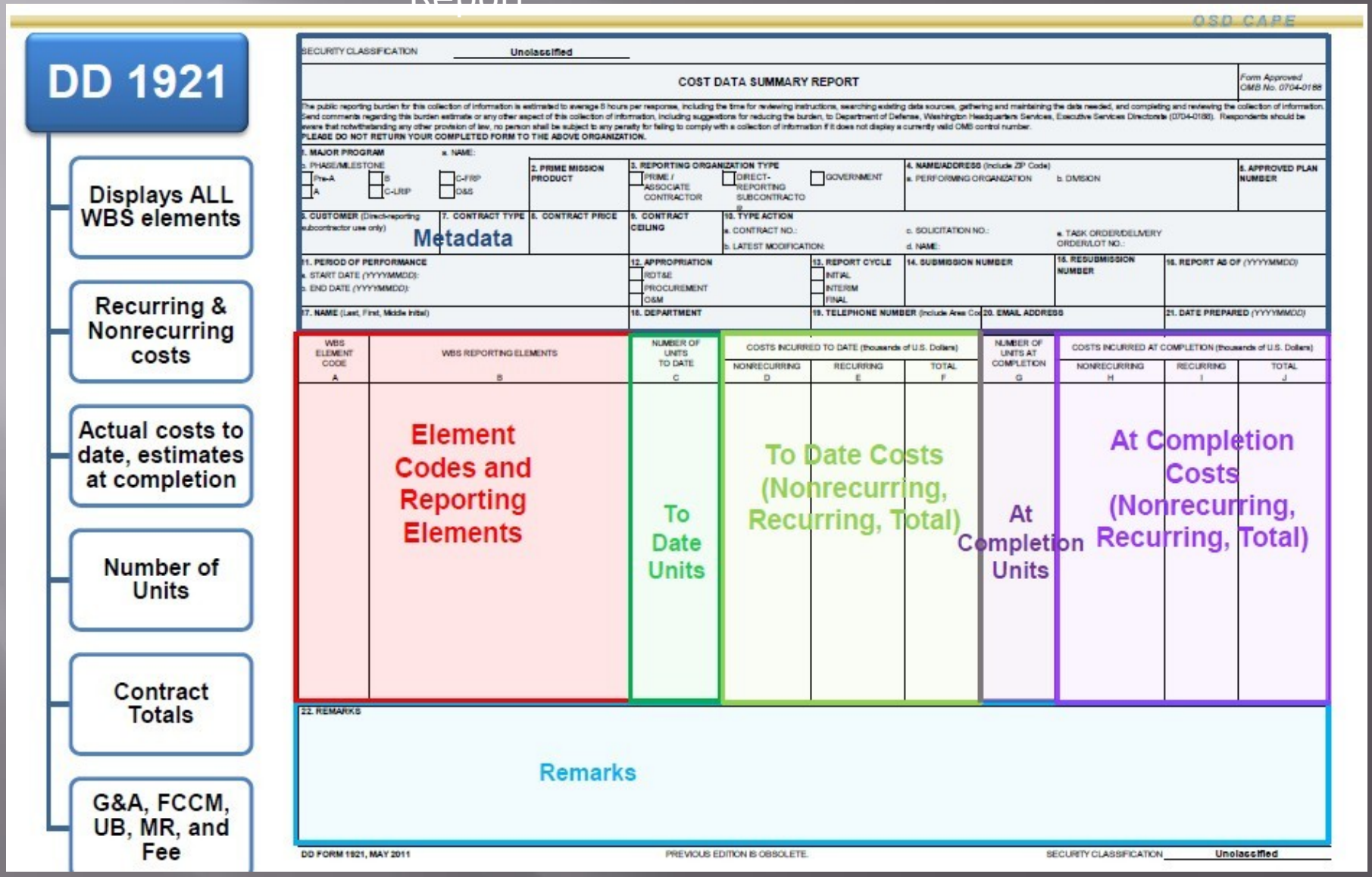
Element Names

Technical, Work, and Cost Content Definitions

CWBS CODE	CWBS ELEMENT LEVEL 1	2	3	4	5	CWBS ELEMENT NAME	CWBS DEFINITION
1.0	X					P-49 Phoenix Fighter	This WBS element includes the cost of the P-49 Phoenix Fighter in addition to the cost of the common WBS elements. The P-49 Phoenix Fighter is an Army aircraft developed to conduct anti-submarine warfare. This WBS element reports the total production cost, includes all design, development, production, and procurement efforts associated with the total complement of equipment, software, services, facilities, and integrated logistics support that are necessary to deliver and maintain the aircraft, through the cost for the common WBS elements. WBS element 1.1 Air Vehicle captures the cost of the product, while WBS elements 1.3 through 1.1.1 capture the cost of the "common elements".
1.1		X				Air Vehicle	The air vehicle element includes design, production, material and equipment procurements including associated vendor design/development efforts to provide for a functionally integrated air vehicle including installation of engines and avionics and all contractor
1.1.1			X			Airframe	vendor design to provide the fuselage, canopy assembly, and access doors. The makeup of the air frame is comprised of steel and composite metals including aluminum alloys. This element includes the basic structure including the wings, fuselage, empennage, and nacelle.
1.1.2			X			Propulsion	The propulsion system incorporates the X-5231 engine. The engine is started by firing the initiator by command by the Missile Control Unit. The initiator is connected to the engine start cartridge and the igniter cartridge. The start cartridge produces high pressure gasses which impinge on a turbine, thereby spinning the engine up to starting speed.
1.1.3			X			Vehicle Subsystems	The vehicle subsystems includes design, production, material and equipment procurements including associated vendor design/development efforts to provide for the Auxiliary Power Unit, Airframe Mounted Accessory Drive, Air Turbine Starter, oil cooling lines. The equipments perform engine starting on the ground, emergency starting during flight, ground checkout operations of aircraft accessories, and power takeoff for hydraulic pumps and electrical generator system and fuel motive flow pumps.
1.1.4			X			Avionics	The avionics includes the X-1PY radar, radar altimeter, direction finding set, doppler compass, computer. The contractor is procuring this item from a supplier, and is also completing tests upon delivery.
1.1.5			X			Armament/Weapons Delivery	This WBS element is not applicable to this contract.
1.1.6			X			Auxiliary Equipment	This WBS element is not applicable to this contract.
1.1.7			X			Furnishings and Equipment	This WBS element is not applicable to this contract.
1.1.8			X			Air Vehicle Software	This WBS element is not applicable to this contract.
1.1.9			X			Air Vehicle Integration, Assembly, Test, and Checkout	The air vehicle integration, assembly, test and checkout is conducted by the contractor at the contractor's site. It includes load analysis, stress analysis, and maintenance effort. Also included is the joining and instalaction of all third level WBS elements into the air vehicle, as well as final acceptance testing. All work is being conducted by the contractor at the contractor's facilities.
1.2		X				Systems Engineering	This WBS element is not applicable to this contract.
1.3		X				Program Management	Program management includes the contractor's efforts to perform tasks required for planning and control of program schedules, cost and technicla performance including WBS maintenance, work authorizations, budgeting and data reporting. Also included is management and maintenance of the requirements database.
1.4		X				System Test and Evaluation	This WBS element is not applicable to this contract.
1.5		X				Training	This WBS element is not applicable to this contract.
1.6		X				Data	This WBS element is not applicable to this contract.
1.7		X				Peculiar Support Equipment	This WBS element is not applicable to this contract.
1.8		X				Common Support Equipment	This WBS element is not applicable to this contract.
1.9		X				Operational/Site Activation	This WBS element is not applicable to this contract.
1.10		X				Industrial Facilities	This WBS element is not applicable to this contract.
1.11		X				Initial Spares & Repair Parts	This WBS element is not applicable to this contract.

Contractor delivers CWBS Dictionary IAW CSDR Plan and Data Item Description

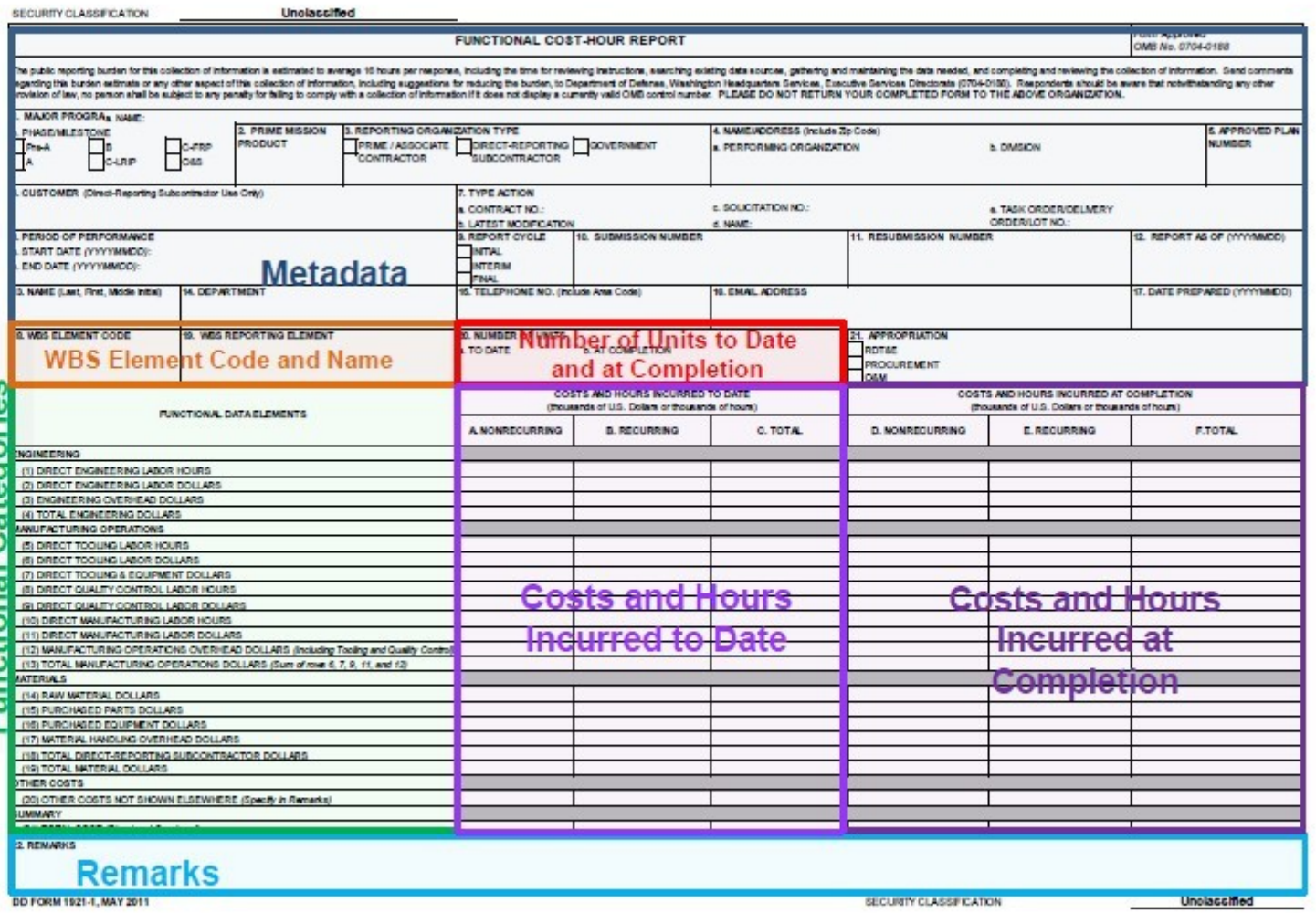
DD Form 1921 – Cost Data Summary Report


OSD CAPE
DD 1921
Displays ALL WBS elements
Recurring & Nonrecurring costs
Actual costs to date, estimates at completion
Number of Units
Contract Totals
G&A, FCCM, UB, MR, and Fee
SECURITY CLASSIFICATION Unclassified
COST DATA SUMMARY REPORT
Form Approved OMB No. 0704-0188
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.
Metadata
WBS ELEMENT CODE A
WBS REPORTING ELEMENTS B
NUMBER OF UNITS TO DATE C
COSTS INCURRED TO DATE (thousands of U.S. Dollars)
NONRECURRING D
RECURRING E
TOTAL F
NUMBER OF UNITS AT COMPLETION G
COSTS INCURRED AT COMPLETION (thousands of U.S. Dollars)
NONRECURRING H
RECURRING I
TOTAL J
Element Codes and Reporting Elements
To Date Units
To Date Costs (Nonrecurring, Recurring, Total)
At Completion Units
At Completion Costs (Nonrecurring, Recurring, Total)
22. REMARKS
Remarks
DD FORM 1921, MAY 2011
PREVIOUS EDITION IS OBSOLETE.
SECURITY CLASSIFICATION Unclassified

DD-1921-1 Functional Cost Per Hour Report

DD 1921-1

- Insight into individual WBS elements
- Recurring & Nonrecurring costs
- Actual costs to date, estimates at completion
- Detailed breakout of all resource data
- Reporting by functional categories



SECURITY CLASSIFICATION: Unclassified

FUNCTIONAL COST-HOUR REPORT

OMB No. 0704-0188

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1. MAJOR PROGRAM NAME:
2. PHASE/MILESTONE: Pre-A, A, B, C-IRIP, C-LRIP, C-FRP, O&S
2. PRIME MISSION PRODUCT
3. REPORTING ORGANIZATION TYPE: PRIME / ASSOCIATE CONTRACTOR, DIRECT-REPORTING SUBCONTRACTOR, GOVERNMENT
4. NAME/ADDRESS (Include Zip Code): a. PERFORMING ORGANIZATION, b. DIVISION
5. APPROVED PLAN NUMBER
6. CUSTOMER (Direct-Reporting Subcontractor Use Only)
7. TYPE ACTION: a. CONTRACT NO.; b. LATEST MODIFICATION; c. SOLICITATION NO.; d. NAME; e. TASK ORDER/DELIVERY ORDER/LOT NO.:
8. PERIOD OF PERFORMANCE: a. START DATE (YYYYMMDD); b. END DATE (YYYYMMDD):
9. REPORT CYCLE: INITIAL, INTERIM, FINAL
10. SUBMISSION NUMBER
11. RESUBMISSION NUMBER
12. REPORT AS OF (YYYYMMDD)
13. NAME (Last, First, Middle Initial)
14. DEPARTMENT
15. TELEPHONE NO. (Include Area Code)
16. EMAIL ADDRESS
17. DATE PREPARED (YYYYMMDD)

Metadata

18. WBS ELEMENT CODE
19. WBS REPORTING ELEMENT

WBS Element Code and Name

20. NUMBER OF UNITS: a. TO DATE; b. AT COMPLETION

Number of Units to Date and at Completion

21. APPROPRIATION: RDT&E, PROCUREMENT, O&M

Functional Categories

FUNCTIONAL DATA ELEMENTS	COSTS AND HOURS INCURRED TO DATE (thousands of U.S. Dollars or thousands of hours) A. NONRECURRING	B. RECURRING	C. TOTAL	COSTS AND HOURS INCURRED AT COMPLETION (thousands of U.S. Dollars or thousands of hours) D. NONRECURRING	E. RECURRING	F. TOTAL
ENGINEERING						
(1) DIRECT ENGINEERING LABOR HOURS						
(2) DIRECT ENGINEERING LABOR DOLLARS						
(3) ENGINEERING OVERHEAD DOLLARS						
(4) TOTAL ENGINEERING DOLLARS						
MANUFACTURING OPERATIONS						
(5) DIRECT TOOLING LABOR HOURS						
(6) DIRECT TOOLING LABOR DOLLARS						
(7) DIRECT TOOLING & EQUIPMENT DOLLARS						
(8) DIRECT QUALITY CONTROL LABOR HOURS						
(9) DIRECT QUALITY CONTROL LABOR DOLLARS						
(10) DIRECT MANUFACTURING LABOR HOURS						
(11) DIRECT MANUFACTURING LABOR DOLLARS						
(12) MANUFACTURING OPERATIONS OVERHEAD DOLLARS (Including Tooling and Quality Control)						
(13) TOTAL MANUFACTURING OPERATIONS DOLLARS (Sum of rows 6, 7, 9, 11, and 12)						
MATERIALS						
(14) RAW MATERIAL DOLLARS						
(15) PURCHASED PARTS DOLLARS						
(16) PURCHASED EQUIPMENT DOLLARS						
(17) MATERIAL HANDLING OVERHEAD DOLLARS						
(18) TOTAL DIRECT-REPORTING SUBCONTRACTOR DOLLARS						
(19) TOTAL MATERIAL DOLLARS						
OTHER COSTS						
(20) OTHER COSTS NOT SHOWN ELSEWHERE (Specify in Remarks)						
SUMMARY						

Costs and Hours Incurred to Date

Costs and Hours Incurred at Completion

22. REMARKS

Remarks

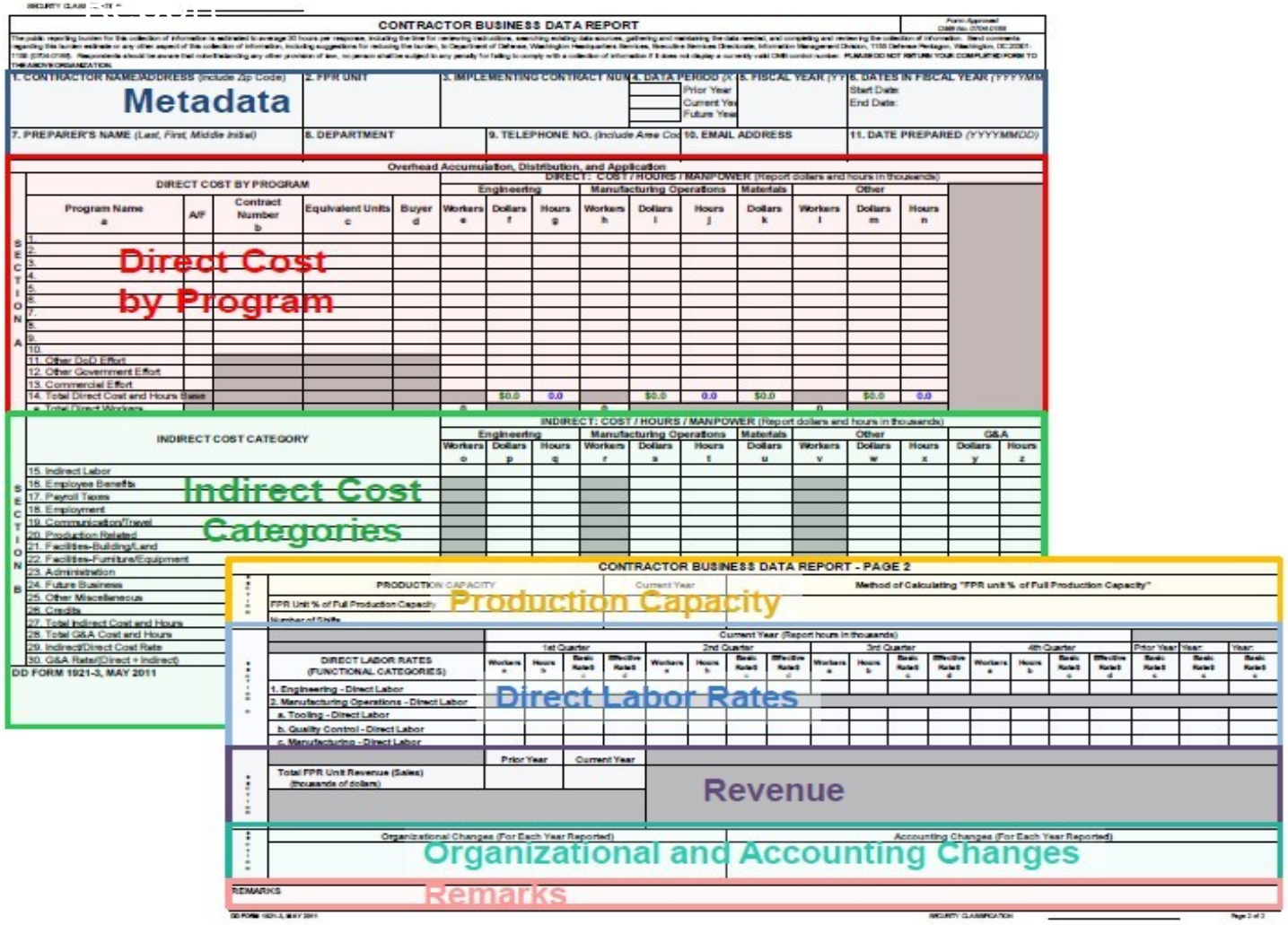
DD FORM 1921-1, MAY 2011

SECURITY CLASSIFICATION: Unclassified

DD 1921-3 – Contract Business Data

DD 1921-3

- Report per contractor site
- Covers all DoD business
- Direct Costs by Program
- Indirect Cost Categories
- Direct Labor Rates by Function
- Organization & Accounting Changes

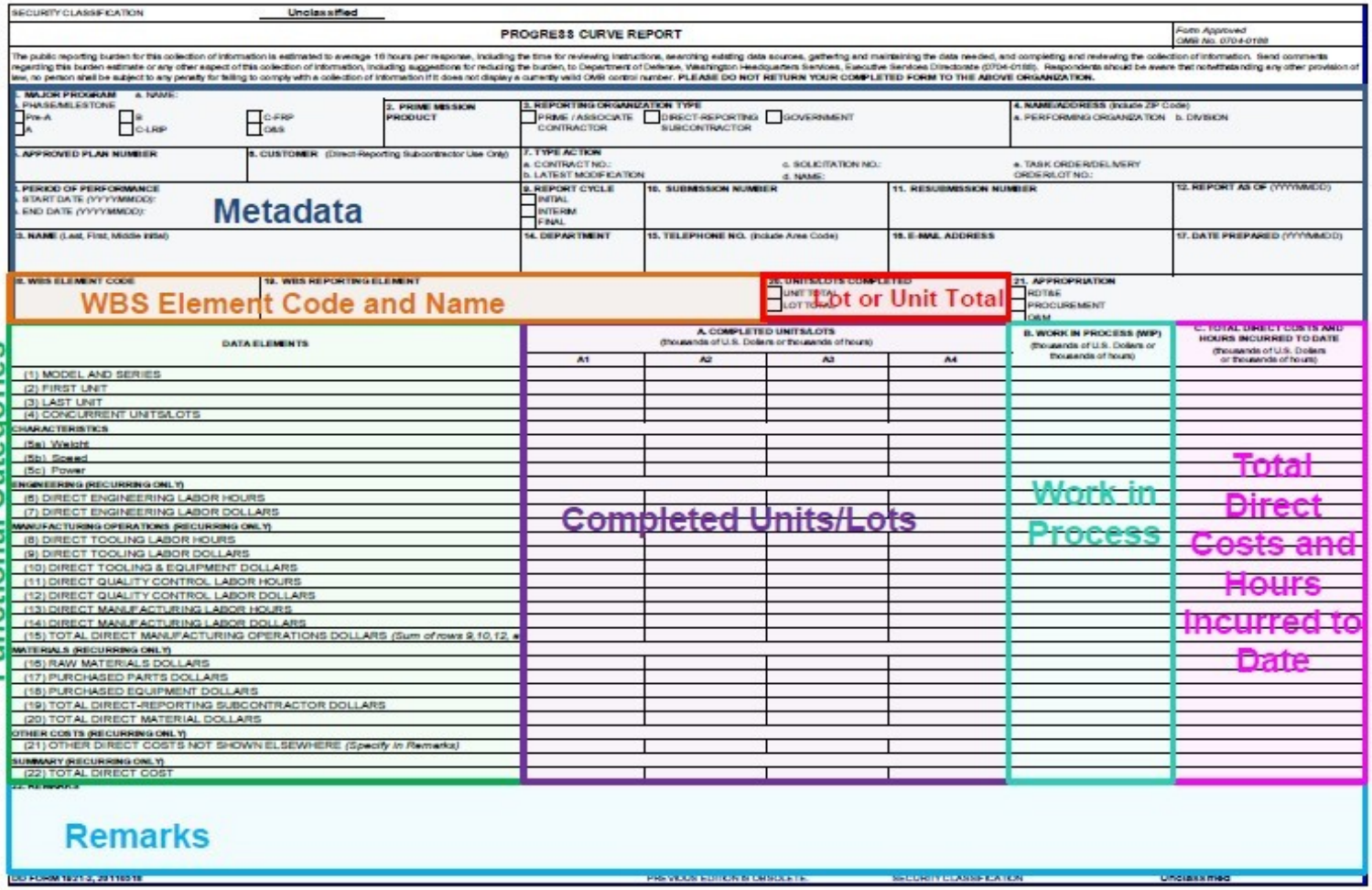


Note: Only one required per business entity per year

DD 1921-2 - Progress Curve Report

DD 1921-2

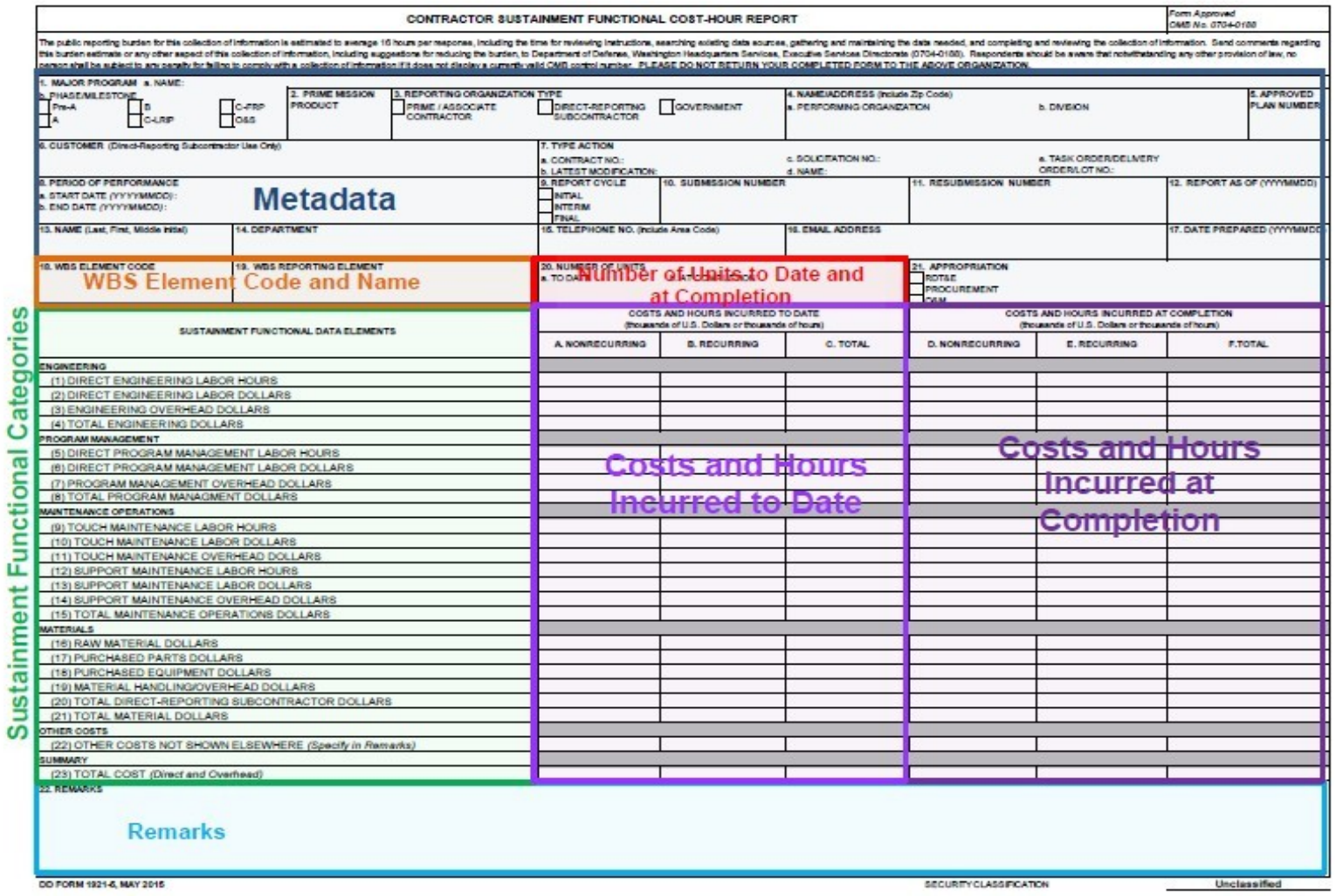
- For specific hardware WBS elements
- Unit or Lot reporting
- Technical Characteristics
- To Date, Direct Recurring costs & hours
- Detailed breakout of resource data
- Reporting by functional category


SECURITY CLASSIFICATION
Unclassified
PROGRESS CURVE REPORT
Form Approved
OMB No. 0704-0188
Metadata
WBS Element Code and Name
Lot or Unit Total
Functional Categories
DATA ELEMENTS
A. COMPLETED UNITS/LOTS
(thousands of U.S. Dollars or thousands of hours)
A1
A2
A3
A4
B. WORK IN PROCESS (WIP)
(thousands of U.S. Dollars or thousands of hours)
C. TOTAL DIRECT COSTS AND HOURS INCURRED TO DATE
(thousands of U.S. Dollars or thousands of hours)
(1) MODEL AND SERIES
(2) FIRST UNIT
(3) LAST UNIT
(4) CONCURRENT UNITS/LOTS
CHARACTERISTICS
(5a) Weight
(5b) Speed
(5c) Power
ENGINEERING (RECURRING ONLY)
(6) DIRECT ENGINEERING LABOR HOURS
(7) DIRECT ENGINEERING LABOR DOLLARS
MANUFACTURING OPERATIONS (RECURRING ONLY)
(8) DIRECT TOOLING LABOR HOURS
(9) DIRECT TOOLING LABOR DOLLARS
(10) DIRECT TOOLING & EQUIPMENT DOLLARS
(11) DIRECT QUALITY CONTROL LABOR HOURS
(12) DIRECT QUALITY CONTROL LABOR DOLLARS
(13) DIRECT MANUFACTURING LABOR HOURS
(14) DIRECT MANUFACTURING LABOR DOLLARS
(15) TOTAL DIRECT MANUFACTURING OPERATIONS DOLLARS (Sum of rows 9,10,12, a
MATERIALS (RECURRING ONLY)
(16) RAW MATERIALS DOLLARS
(17) PURCHASED PARTS DOLLARS
(18) PURCHASED EQUIPMENT DOLLARS
(19) TOTAL DIRECT-REPORTING SUBCONTRACTOR DOLLARS
(20) TOTAL DIRECT MATERIAL DOLLARS
OTHER COSTS (RECURRING ONLY)
(21) OTHER DIRECT COSTS NOT SHOWN ELSEWHERE (Specify in Remarks)
SUMMARY (RECURRING ONLY)
(22) TOTAL DIRECT COST
Completed Units/Lots
Work in Process
Total Direct Costs and Hours Incurred to Date
Remarks

DD 1921-5 – Contract Sustainment Functional Cost-Hour Report

DD 1921-5

- Insight into individual WBS elements
- Recurring & Nonrecurring costs
- Actual costs to date, estimates at completion
- Detailed breakout of all resource data
- Reporting by sustainment functional categories



CONTRACTOR SUSTAINMENT FUNCTIONAL COST-HOUR REPORT

Form Approved
OMB No. 0704-0188

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1. MAJOR PROGRAM a. NAME:
b. PHASE/MILESTONE: Pre-A, A, B, C-IOC, C-FRP, C-LRIP, O&S
2. PRIME MISSION PRODUCT
3. REPORTING ORGANIZATION TYPE: PRIME / ASSOCIATE CONTRACTOR; DIRECT-REPORTING SUBCONTRACTOR; GOVERNMENT
4. NAME/ADDRESS (Include Zip Code): a. PERFORMING ORGANIZATION; b. DIVISION
5. APPROVED PLAN NUMBER
6. CUSTOMER (Direct-Reporting Subcontractor Use Only)
7. TYPE ACTION: a. CONTRACT NO.; b. LATEST MODIFICATION; c. SOLICITATION NO.; d. NAME; e. TASK ORDER/DELIVERY ORDER/LOT NO.:
8. PERIOD OF PERFORMANCE: a. START DATE (YYYYMMDD); b. END DATE (YYYYMMDD):
Metadata
9. REPORT CYCLE: INITIAL, INTERIM, FINAL
10. SUBMISSION NUMBER
11. RESUBMISSION NUMBER
12. REPORT AS OF (YYYYMMDD)
13. NAME (Last, First, Middle Initial)
14. DEPARTMENT
15. TELEPHONE NO. (Include Area Code)
16. EMAIL ADDRESS
17. DATE PREPARED (YYYYMMDD)
18. WBS ELEMENT CODE
19. WBS REPORTING ELEMENT
WBS Element Code and Name
20. NUMBER OF UNITS: a. TO DATE; b. AT COMPLETION
Number of Units to Date and at Completion
21. APPROPRIATION: ROTAE, PROCUREMENT, OPA

Sustainment Functional Categories

SUSTAINMENT FUNCTIONAL DATA ELEMENTS	COSTS AND HOURS INCURRED TO DATE (thousands of U.S. Dollars or thousands of hours) A. NONRECURRING	B. RECURRING	C. TOTAL	COSTS AND HOURS INCURRED AT COMPLETION (thousands of U.S. Dollars or thousands of hours) D. NONRECURRING	E. RECURRING	F. TOTAL
ENGINEERING						
(1) DIRECT ENGINEERING LABOR HOURS						
(2) DIRECT ENGINEERING LABOR DOLLARS						
(3) ENGINEERING OVERHEAD DOLLARS						
(4) TOTAL ENGINEERING DOLLARS						
PROGRAM MANAGEMENT						
(5) DIRECT PROGRAM MANAGEMENT LABOR HOURS						
(6) DIRECT PROGRAM MANAGEMENT LABOR DOLLARS						
(7) PROGRAM MANAGEMENT OVERHEAD DOLLARS						
(8) TOTAL PROGRAM MANAGMENT DOLLARS						
MAINTENANCE OPERATIONS						
(9) TOUCH MAINTENANCE LABOR HOURS						
(10) TOUCH MAINTENANCE LABOR DOLLARS						
(11) TOUCH MAINTENANCE OVERHEAD DOLLARS						
(12) SUPPORT MAINTENANCE LABOR HOURS						
(13) SUPPORT MAINTENANCE LABOR DOLLARS						
(14) SUPPORT MAINTENANCE OVERHEAD DOLLARS						
(15) TOTAL MAINTENANCE OPERATIONS DOLLARS						
MATERIALS						
(16) RAW MATERIAL DOLLARS						
(17) PURCHASED PARTS DOLLARS						
(18) PURCHASED EQUIPMENT DOLLARS						
(19) MATERIAL HANDLING/OVERHEAD DOLLARS						
(20) TOTAL DIRECT-REPORTING SUBCONTRACTOR DOLLARS						
(21) TOTAL MATERIAL DOLLARS						
OTHER COSTS						
(22) OTHER COSTS NOT SHOWN ELSEWHERE *(Specify in Remarks)*						
SUMMARY						
(23) TOTAL COST *(Direct and Overhead)*						

Costs and Hours Incurred to Date

Costs and Hours Incurred at Completion

22. REMARKS

Remarks

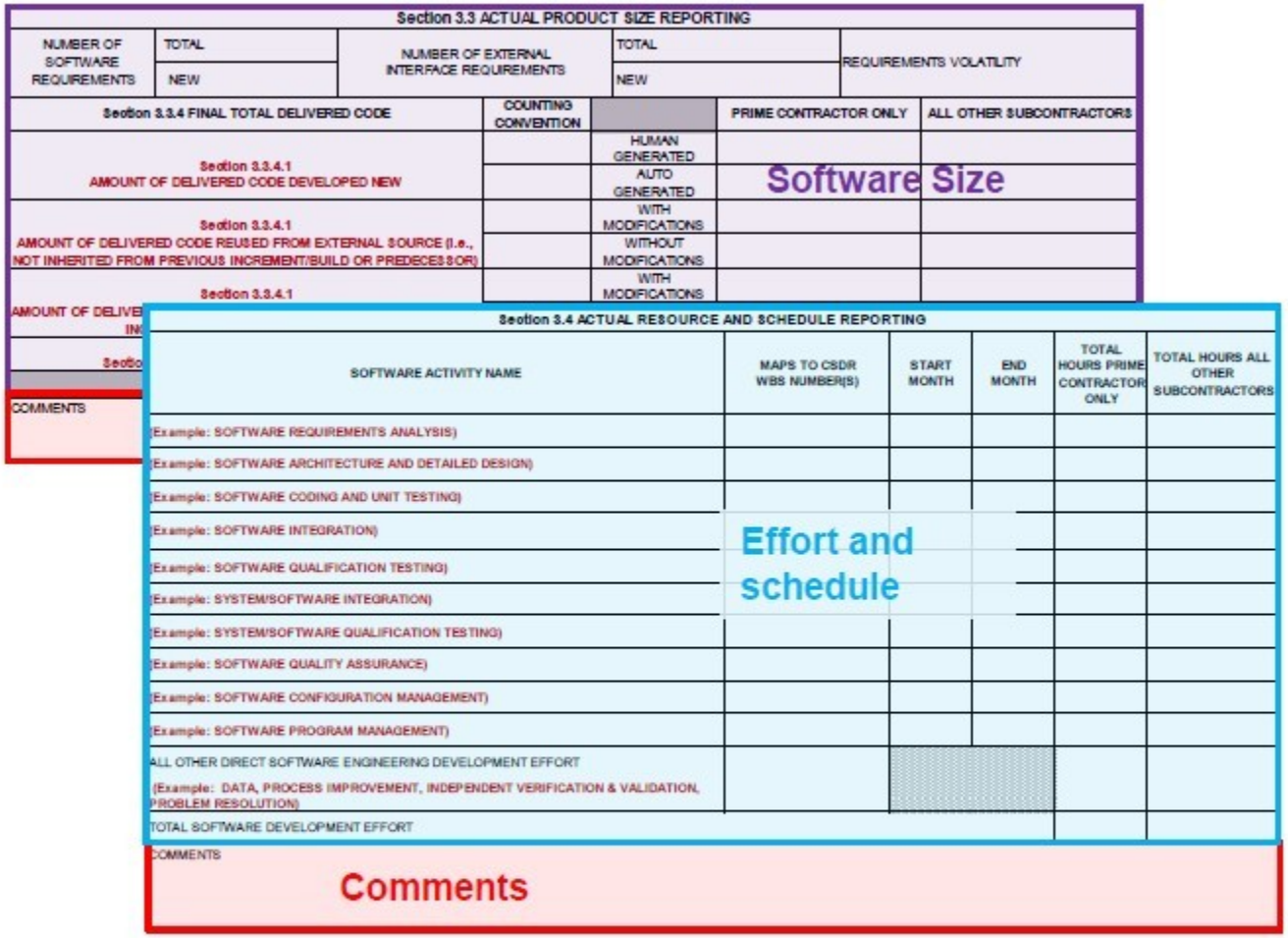
DD FORM 1921-5, MAY 2015

SECURITY CLASSIFICATION: Unclassified

Initial and Final Software Resource Data Report

SRDR

- Software size, effort, and schedule
- Data further explained in data dictionary
- Initial Developer Report- Due at beginning of project increment (estimates)
- Final Developer Report- Due at completion of project increment (actuals)



Section 3.3 ACTUAL PRODUCT SIZE REPORTING

NUMBER OF SOFTWARE REQUIREMENTS	TOTAL	NUMBER OF EXTERNAL INTERFACE REQUIREMENTS	TOTAL	REQUIREMENTS VOLATILITY
	NEW		NEW	

Section 3.3.4 FINAL TOTAL DELIVERED CODE	COUNTING CONVENTION		PRIME CONTRACTOR ONLY	ALL OTHER SUBCONTRACTORS
Section 3.3.4.1 AMOUNT OF DELIVERED CODE DEVELOPED NEW		HUMAN GENERATED		
		AUTO GENERATED		
Section 3.3.4.1 AMOUNT OF DELIVERED CODE REUSED FROM EXTERNAL SOURCE (i.e., NOT INHERITED FROM PREVIOUS INCREMENT/BUILD OR PREDECESSOR)		WITH MODIFICATIONS		
		WITHOUT MODIFICATIONS		
Section 3.3.4.1 AMOUNT OF DELIVE IN		WITH MODIFICATIONS		
Sectio				
COMMENTS				

Software Size

Section 3.4 ACTUAL RESOURCE AND SCHEDULE REPORTING

SOFTWARE ACTIVITY NAME	MAPS TO CSDR WBS NUMBER(S)	START MONTH	END MONTH	TOTAL HOURS PRIME CONTRACTOR ONLY	TOTAL HOURS ALL OTHER SUBCONTRACTORS
(Example: SOFTWARE REQUIREMENTS ANALYSIS)					
(Example: SOFTWARE ARCHITECTURE AND DETAILED DESIGN)					
(Example: SOFTWARE CODING AND UNIT TESTING)					
(Example: SOFTWARE INTEGRATION)					
(Example: SOFTWARE QUALIFICATION TESTING)					
(Example: SYSTEM/SOFTWARE INTEGRATION)					
(Example: SYSTEM/SOFTWARE QUALIFICATION TESTING)					
(Example: SOFTWARE QUALITY ASSURANCE)					
(Example: SOFTWARE CONFIGURATION MANAGEMENT)					
(Example: SOFTWARE PROGRAM MANAGEMENT)					
ALL OTHER DIRECT SOFTWARE ENGINEERING DEVELOPMENT EFFORT (Example: DATA, PROCESS IMPROVEMENT, INDEPENDENT VERIFICATION & VALIDATION, PROBLEM RESOLUTION)					
TOTAL SOFTWARE DEVELOPMENT EFFORT					

Effort and schedule

COMMENTS

Comments